National Testing Agency

Question Paper Name :	88 Electronic Science 13th DEC 2023 Shift 1
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Electronic Science and General Paper

Group Number :	1
Group Id :	878270460
Group Maximum Duration :	0
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Show Attended Group? :	No
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Is this Group for Examiner? :	No
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Show Progress Bar? :	No

General Paper

Section Id :	878270876
Section Number :	1

Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	42
Number of Questions to be attempted :	42
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	8782701524
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Id : 87827036076 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (1 to 5)

Question Label : Comprehension

The following table shows the percentage (%) distribution of 12th class students scoring (i) 95% and above marks, and (ii) between 90 - 95% marks, along with ratio of Girls to Boys among them from six schools A-F of Delhi. Total number of students scoring 95% and above marks and between 90 - 95% marks are 6000 and 10000, respectively. Based on the data in the table, answer the questions that follow.

School-wise Distribution of Students Based on Marks

School	Scoring 95% and above marks(6000)		Scoring between 90 - 95% marks (10000)	
	Percentage of students	Girls : Boys	Percentage of students	Girls : Boys
A	13%	11 : 5	16%	3 : 2
B	18%	5 : 7	6%	1 : 4
C	17%	3 : 5	10%	5 : 3
D	8%	7 : 1	28%	2 : 3
E	24%	5 : 4	21%	9 : 5
F	20%	5 : 3	19%	3 : 4

Sub questions

Question Number : 1 Question Id : 87827036077 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For school E, the difference between the numbers of boys who scored 95% and above marks and boys who scored between 90 - 95% marks is :

(1) 115
(2) 120
(3) 110
(4) 105

Options :

878270141841. 1

878270141842. 2

878270141843. 3

878270141844. 4

Question Number : 2 Question Id : 87827036078 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The number of girls of school B who scored between 90 - 95 % marks is approximately _____ % of the number of girls of school D Who scored 95% and above marks.

(1) 28.57
(2) 22.46
(3) 29.95
(4) 32.46

Options :

878270141845. 1

878270141846. 2

878270141847. 3

878270141848. 4

Question Number : 3 Question Id : 87827036079 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The number of boys of schools E and F together who scored 95% and above marks is approximately _____ % less than the number of girls of schools B and E together who scored between 90 - 95 % marks.

(1) 24
(2) 26
(3) 20
(4) 22

Options :

878270141849. 1

878270141850. 2

878270141851. 3

878270141852. 4

Question Number : 4 Question Id : 87827036080 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Average numbers of boys who scored between 90 - 95% marks from the schools A - E together is :

(1) 746
(2) 718
(3) 745
(4) 785

Options :

878270141853. 1

878270141854. 2

878270141855. 3

878270141856. 4

Question Number : 5 Question Id : 87827036081 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

What is the ratio of the number of boys of school C who scored between 90 - 95 % marks to the number of boys who scored 95% and above marks in the same school ?

(1) 5 : 9
(2) 10 : 17
(3) 10 : 13
(4) 12 : 17

Options :

878270141857. 1

878270141858. 2

878270141859. 3

878270141860. 4

Question Id : 87827036076 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (1 to 5)

Question Label : Comprehension

नीचे दी गई तालिका में दिल्ली के छह स्कूलों (A-F) में कक्षा 12 में अध्ययनरत (i) 95% या उससे अधिक, तथा (ii) 90 से 95% के बीच अंक प्राप्त करने वाले विद्यार्थियों का प्रतिशत (%) वितरण तथा उनमें लडकियों और लड़को का अनुपात दर्शाया गया है। 95% या उससे अधिक अंक प्राप्त करने वाले तथा 90 से 95% के बीच अंक प्राप्त करने वाले विद्यार्थियों की कुल संख्या क्रमश: 6000 और 10000 है। तालिका में दिए गए आँकड़ों के आधार पर नीचे दिए प्रश्नों के उत्तर दिजिए।

प्राप्तांको के आधार पर विद्याथियों का स्कूल-वार वितरण :

स्कूल	95% या उससे अधिक अंक प्राप्त करने वाले विद्यार्थी (6000)		90 से 95% के बीच अंक प्राप्त करने वाले विद्यार्थी (10000)	
	विद्यार्थियों का प्रतिशत	लड़कियाँ : लड़के	विद्यार्थियों का प्रतिशत	लड़कियाँ : लड़के
A	13%	11 : 5	16%	3 : 2
B	18%	5 : 7	6%	1 : 4
C	17%	3 : 5	10%	5 : 3
D	8%	7 : 1	28%	2 : 3
E	24%	5 : 4	21%	9 : 5
F	20%	5 : 3	19%	3 : 4

Sub questions

Question Number : 1 Question Id : 87827036077 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

स्कूल E में 95% या उससे अंक प्राप्त करने वाले लड़को की संख्या और 90 से 95% के बीच अंक प्राप्त करने वाले लड़को की संख्या के बीच कितना अंतर है?

(1) 115
(2) 120
(3) 110
(4) 105

Options :

878270141841. 1

878270141842. 2

878270141843. 3

878270141844. 4

Question Number : 2 Question Id : 87827036078 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

स्कूल B की 90 से 95% के बीच अंक प्राप्त करने वाली लड़कियों की संख्या स्कूल D की 95% या उससे अधिक अंक प्राप्त करने वाली लड़कियों की संख्या की लगभग कितने प्रतिशत है?

(1) 28.57
(2) 22.46
(3) 29.95
(4) 32.46

Options :

878270141845. 1

878270141846. 2

878270141847. 3

878270141848. 4

Question Number : 3 Question Id : 87827036079 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

स्कूल E और F में 95% या उससे अधिक प्राप्त करने वाले लड़कों की संख्या स्कूल B और E में 90 से 95% के बीच अंक प्राप्त करने वाली लड़कियों की संख्या से लगभग कितने प्रतिशत कम है?

(1) 24
(2) 26
(3) 20
(4) 22

Options :

878270141849. 1

878270141850. 2

878270141851. 3

878270141852. 4

Question Number : 4 Question Id : 87827036080 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

स्कूल A से E तक सभी स्कूलों में 90 से 95% के बीच अंक प्राप्त करने वाले लड़कों की औसत संख्या कितनी है?

(1) 746
(2) 718
(3) 745
(4) 785

Options :

878270141853. 1

878270141854. 2

878270141855. 3

878270141856. 4

Question Number : 5 Question Id : 87827036081 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

स्कूल C के 90 से 95% के बीच अंक प्राप्त करने वाले लड़को की संख्या और उसी स्कूल के 95% या उससे अधिक अंक प्राप्त करने वाले लड़को की संख्या का अनुपात क्या है ?

(1) 5 : 9
(2) 10 : 17
(3) 10 : 13
(4) 12 : 17

Options :

878270141857. 1

878270141858. 2

878270141859. 3

878270141860. 4

Sub-Section Number : 2

Sub-Section Id : 8782701525

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 6 Question Id : 87827036082 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

"When a pin pricks our finger we withdraw the pin". Such kind of behaviour is termed as :

(1) Emotional Instincts
(2) Reflex Actions
(3) Biological Instincts
(4) Intellectual Instincts

Options :

878270141861. 1

878270141862. 2

878270141863. 3

878270141864. 4

Question Number : 6 Question Id : 87827036082 Question Type : MCQ Option Shuffling : No Is

Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

''जब कोई पिन हमारी उँगली में चुभती है तो हम पिन हटा लेते हैं'' इस प्रकार के व्यवहार को कहा जाता है :

(1) भावात्मक सहज बोध

(2) प्रतिवर्ती क्रिया

(3) जैविक सहजबोध

(4) बौद्धिक सहजबोध

Options :

878270141861. 1

878270141862. 2

878270141863. 3

878270141864. 4

Question Number : 7 Question Id : 87827036083 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements :

Statement I : Problem based learning is a learner centred approach.

Statement II : In guided discovery learning students are encouraged to construct their understanding without the assistance of teacher guided questions and directions

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **Statement I** and **Statement II** are correct

(2) Both **Statement I** and **Statement II** are incorrect

(3) **Statement I** is correct but **Statement II** is incorrect

(4) **Statement I** is incorrect but **Statement II** is correct

Options :

878270141865. 1

878270141866. 2

878270141867. 3

878270141868. 4

Question Number : 7 Question Id : 87827036083 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

नीचे दो कथन दिए गए हैं :

कथन I : समस्या आधारित अधिगम अधिगमकर्ता-केन्द्रित उपागम है।

कथन II : निर्देशित खोज अधिगम में विद्यार्थियों को शिक्षक निर्देशित प्रश्नों एवं निर्देशों की सहायता के बिना उनकी समझ निर्मित करने के लिए प्रोत्साहित किया जाता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से **सही उत्तर** चयन कीजिए :

(1) **कथन I** और **कथन II** दोनों सत्य हैं।

(2) **कथन I** और **कथन II** दोनों असत्य हैं।

(3) **कथन I** सत्य है, लेकिन **कथन II** असत्य है।

(4) **कथन I** असत्य है, लेकिन **कथन II** सत्य है।

Options :

878270141865. 1

878270141866. 2

878270141867. 3

878270141868. 4

Question Number : 8 Question Id : 87827036084 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements :

Statement I : Teacher centred methods of teaching are more effective than learner centred methods in promoting deep learning.

Statement II : Lecture method involves the use of open-ended problems to encourage critical thinking and problem solving.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **Statement I** and **Statement II** are correct

(2) Both **Statement I** and **Statement II** are incorrect

(3) **Statement I** is correct but **Statement II** is incorrect

(4) **Statement I** is incorrect but **Statement II** is correct

Options :

878270141869. 1

878270141870. 2

878270141871. 3

878270141872. 4

Question Number : 8 Question Id : 87827036084 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

नीचे दो कथन दिए गए हैं :

कथन I : गहन अधिगम को प्रोत्साहित करने के लिए अधिगमकर्ता-केन्द्रित विधियों की अपेक्षा शिक्षण की शिक्षक-केन्द्रित विधियाँ अधिक प्रभावी होती हैं।

कथन II : व्याख्यान विधि में आलोचनात्मक चिंतन और समस्या निवारण को प्रोत्साहित करने के लिए अबाध-प्रवेश समस्याओं का प्रयोग शामिल होता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से **सही उत्तर** चयन कीजिए :

(1) **कथन I** और **कथन II** दोनों सत्य हैं।

(2) **कथन I** और **कथन II** दोनों असत्य हैं।

(3) **कथन I** सत्य है, लेकिन **कथन II** असत्य है।

(4) **कथन I** असत्य है, लेकिन **कथन II** सत्य है।

Options :

878270141869. 1

878270141870. 2

878270141871. 3

878270141872. 4

Question Number : 9 Question Id : 87827036085 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Mr. Johnson wants to create a mind map for his students to help them understand the concept of photosynthesis. Which of the following tools would be most suitable ?

(1) Mindmeister
(2) Edpuzzle
(3) Nearpod
(4) Hot potato

Options :

878270141873. 1

878270141874. 2

878270141875. 3

878270141876. 4

Question Number : 9 Question Id : 87827036085 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

मि. जॉनसन अपने विद्यार्थियों को प्रकाश संश्लेषण की संकल्पना को समझने में उनकी सहायता करने के लिए एक मान चित्र (माइंड मैप) बनाना चाहते हैं। निम्नलिखित में से कौन सा साधन सर्वाधिक उपयुक्त होगा ?

(1) माइंडमीस्टर
(2) एडपज़ल
(3) नीयरपॉड
(4) हॉट पोटेटो

Options :

878270141873. 1

878270141874. 2

878270141875. 3

878270141876. 4

Question Number : 10 Question Id : 87827036086 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which DTH channel deals with social science -1, social and behavioural sciences ?

(1) Channel - 02 - Sanskriti
(2) Chhanel - 06 - Vidhik
(3) Channel - 03 - Prabodh
(4) Vhannel - 05 - Prabandhan

Options :

878270141877. 1

878270141878. 2

878270141879. 3

878270141880. 4

Question Number : 10 Question Id : 87827036086 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

निम्नलिखित में से कौन सा डीटीएच चैनल सामाजिक विज्ञान-1, सामाजिक एवं व्यवहारपरक विज्ञान से संबंधित है ?

(1) चैनल - 02 - संस्कृति
(2) चैनल - 06 - विधिक
(3) चैनल - 03 - प्रबोध
(4) चैनल - 05 - प्रबंधन

Options :

878270141877. 1

878270141878. 2

878270141879. 3

878270141880. 4

Question Number : 11 Question Id : 87827036087 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Identify the advantages of close-ended questions in survey research :

(A) They allow unusual responses to be derived.

(B) It is easy to process their answers.

(C) They reduce the possibility of variability in the recording of answers.

Choose the **correct** answer from the options given below :

(1) (A) and (B) Only

(2) (B) and (C) Only

(3) (A) and (C) Only

(4) (A), (B) and (C)

Options :

878270141881. 1

878270141882. 2

878270141883. 3

878270141884. 4

Question Number : 11 Question Id : 87827036087 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

सर्वेक्षण शोध में अमुक्त प्रश्नों के लाभों की पहचान कीजिए :

(A) वे असामान्य उत्तरों के उत्पन्न होने की अनुमति देते है।

(B) उनके उत्तरों को संसाधित करना सरल है।

(C) वे उत्तरों को रिकार्ड करने में परिवर्तनशीलता की संभावना को कम करते है।

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A) और (B)

(2) केवल (B) और (C)

(3) केवल (A) और (C)

(4) (A), (B) और (C)

Options :

878270141881. 1

878270141882. 2

878270141883. 3

878270141884. 4

Question Number : 12 Question Id : 87827036088 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A researcher gives the following options to a respondent while asking a question during a survey.
Identify the options which suffer from ambiguity :

(A) Very often

(B) Quite often

(C) Not very often

(D) Not at all

Choose the **correct** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (B), (C) and (D) Only

(3) (A), (C) and (D) Only

(4) (A), (B), (C) and (D)

Options :

878270141885. 1

878270141886. 2

878270141887. 3

878270141888. 4

Question Number : 12 Question Id : 87827036088 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

सर्वेक्षण करने के दौरान एक शोधकर्ता प्रश्न पूछते समय उत्तर दाताओं को निम्न लिखित विकल्प देता है। उन विकल्पों की पहचान कीजिए जिनमें अनेकार्थकता पायी जाती है।

(A) बहुधा प्राय:

(B) नितांत प्राय:

(C) बहुधा प्राय: नहीं

(D) बिल्कुल नहीं

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A), (B) और (C)

(2) केवल (B), (C) और (D)

(3) केवल (A), (C) और (D)

(4) (A), (B), (C) और (D)

Options :

878270141885. 1

878270141886. 2

878270141887. 3

878270141888. 4

Question Number : 13 Question Id : 87827036089 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Identify the advantages of content analysis :

(A) It is a very transparent research method.

(B) It is often referred to favourably as an unobtrusive method.

(C) It is a highly flexible method.

Choose the **correct** answer from the options given below :

(1) (A) and (B) Only

(2) (B) and (C) Only

(3) (A) and (C) Only

(4) (A), (B) and (C)

Options :

878270141889. 1

878270141890. 2

878270141891. 3

878270141892. 4

Question Number : 13 Question Id : 87827036089 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

विषयवस्तु विश्लेषण के लाभों की पहचान कीजिए :

(A) यह शोध की बहुत पारदर्शी विधि है।

(B) इसे प्राय: एक अनुकूल दृष्टि से प्रच्छन विधि के रूप में प्रयोग के लिए संदर्भित किया जाता है।

(C) यह एक बहुत सुनम्य विधि है।

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A) और (B)

(2) केवल (B) और (C)

(3) केवल (A) और (C)

(4) (A), (B) और (C)

Options :

878270141889. 1

878270141890. 2

878270141891. 3

878270141892. 4

Question Number : 14 Question Id : 87827036090 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

When two variables are related in such a way that when one increases, so does the other, you can conclude that :

(1) There is no problem with directionality.
(2) The two variables are positively associated.
(3) There are no latent variables affecting the relationship.
(4) There is a third variable responsible for the causation between them.

Options :

878270141893. 1

878270141894. 2

878270141895. 3

878270141896. 4

Question Number : 14 Question Id : 87827036090 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

जब दो चर इस तरीके से संबंधित हैं कि जब एक चर में वृद्धि होती है तो दूसरे में भी वृद्धि होती है, इससे आप यह निष्कर्ष निकाल सकते है कि :

(1) दिशापरकता की कोई समस्या नहीं है।
(2) दोनों चर सकारात्मक रूप से संबंधित हैं।
(3) संबंधों को प्रभावित करने वाले कोई प्रच्छन चर नहीं हैं।
(4) उनके बीच कार्य-कारण के लिए जिम्मेदार एक तीसरा चर है।

Options :

878270141893. 1

878270141894. 2

878270141895. 3

878270141896. 4

Question Number : 15 Question Id : 87827036091 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Identify the measures of dispersion :

(A) Range

(B) Quartile deviation

(C) Sum of the deviations about mean

(D) Standard deviation

Choose the **correct** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (B), (C) and (D) Only

(3) (A), (B) and (D) Only

(4) (A), (C) and (D) Only

Options :

878270141897. 1

878270141898. 2

878270141899. 3

878270141900. 4

Question Number : 15 Question Id : 87827036091 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

परिक्षेपण (डिसपर्सन) के मापों की पहचान कीजिए।

(A) परास

(B) चतुर्थक विचलन

(C) माध्य के परित: विचलनों का योग

(D) मानक विचलन

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A), (B) और (C)

(2) केवल (B), (C) और (D)

(3) केवल (A), (B) और (D)

(4) केवल (A), (C) और (D)

Options :

878270141897. 1

878270141898. 2

878270141899. 3

878270141900. 4

Question Number : 16 Question Id : 87827036092 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The process by which a message is transmitted via some form of medium is identified as _____ communication :

(1) Formative

(2) Inter-connective

(3) Mediated

(4) Formal

Options :

878270141901. 1

878270141902. 2

878270141903. 3

878270141904. 4

Question Number : 16 Question Id : 87827036092 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

वह प्रक्रिया जिसके द्वारा किसी संदेश को किसी प्रकार के माध्यम से संचारित किया जाता है, उसे _____ संचार के रूप में पहचान जाता है।

(1) रचनात्मक

(2) अंतर-संयोजी

(3) माध्यत

(4) औपचारिक

Options :

878270141901. 1

878270141902. 2

878270141903. 3

878270141904. 4

Question Number : 17 Question Id : 87827036093 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In analog media, contents are :

(1) Non-linear

(2) Linear

(3) Interactive

(4) Customised

Options :

878270141905. 1

878270141906. 2

878270141907. 3

878270141908. 4

Question Number : 17 Question Id : 87827036093 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

सादृश्य मीडिया में विषयवस्तु :

(1) गैर–रेखीय होती है।

(2) रेखीय होती है।

(3) संवादात्मक होती है।

(4) अनुकूलित होती है।

Options :

878270141905. 1

878270141906. 2

878270141907. 3

878270141908. 4

Question Number : 18 Question Id : 87827036094 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The western communication concept is characterised by :

(A) Polydirectionality

(B) Unidirectionality

(C) Transfer of meaning

(D) Message centredness

(E) Flexible sequencing

Choose the **correct** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (B), (C) and (E) Only

(3) (A), (B) and (E) Only

(4) (B), (C) and (D) Only

Options :

878270141909. 1

878270141910. 2

878270141911. 3

878270141912. 4

Question Number : 18 Question Id : 87827036094 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

पाश्चात्य संचार अवधारणा किससे अभिलक्षणित होती है?

(A) बहु-दिशात्मकता

(B) एक-दिशात्मकता

(C) अर्थान्तरण

(D) संदेश केंद्रिकता

(E) सुनम्य अनुक्रमण

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A), (B) और (C)

(2) केवल (B), (C) और (E)

(3) केवल (A), (B) और (E)

(4) केवल (B), (C) और (D)

Options :

878270141909. 1

878270141910. 2

878270141911. 3

878270141912. 4

Question Number : 19 Question Id : 87827036095 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements :

Statement I : Due to technological developments, communication has become mass communication.

Statement II : With the arrival of satellites and computers, communication has become more efficient and complex than ever before.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **Statement I** and **Statement II** are correct

(2) Both **Statement I** and **Statement II** are incorrect

(3) **Statement I** is correct but **Statement II** is incorrect

(4) **Statement I** is incorrect but **Statement II** is correct

Options :

878270141913. 1

878270141914. 2

878270141915. 3

878270141916. 4

Question Number : 19 Question Id : 87827036095 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

नीचे दो कथन दिए गए हैं :

कथन I : तकनीकी विकास के कारण संचार जनसंचार बन गया है।

कथन II : उपग्रहों और कंप्यूटरों के आगमन के साथ संचार पहले से कहीं अधिक प्रभावी और जटिल बन गया है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से **सही उत्तर** चयन कीजिए :

(1) **कथन I** और **कथन II** दोनों सत्य हैं।

(2) **कथन I** और **कथन II** दोनों असत्य हैं।

(3) **कथन I** सत्य है, लेकिन **कथन II** असत्य है।

(4) **कथन I** असत्य है, लेकिन **कथन II** सत्य है।

Options :

878270141913. 1

878270141914. 2

878270141915. 3

878270141916. 4

Question Number : 20 Question Id : 87827036096 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements :

Statement I : Environmental communication includes human representation of nature.

Statement II : For the purpose of promoting environmental communication, only mainstream conventional media should be employed.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **Statement I** and **Statement II** are correct

(2) Both **Statement I** and **Statement II** are incorrect

(3) **Statement I** is correct but **Statement II** is incorrect

(4) **Statement I** is incorrect but **Statement II** is correct

Options :

878270141917. 1

878270141918. 2

878270141919. 3

878270141920. 4

Question Number : 20 Question Id : 87827036096 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

नीचे दो कथन दिए गए हैं :

कथन I : पर्यावरणीय संचार में प्रकृति का मानवीय प्रस्तुतीकरण शामिल है।

कथन II : पर्यावरणीय संचार को बढ़ावा देने के उद्देश्य से केवल मुख्यधारा के परंपरागत मीडिया का ही प्रयोग किया जाना चाहिए।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से **सही उत्तर** चयन कीजिए :

(1) **कथन I** और **कथन II** दोनों सत्य हैं।

(2) **कथन I** और **कथन II** दोनों असत्य हैं।

(3) **कथन I** सत्य है, लेकिन **कथन II** असत्य है।

(4) **कथन I** असत्य है, लेकिन **कथन II** सत्य है।

Options :

878270141917. 1

878270141918. 2

878270141919. 3

878270141920. 4

Question Number : 21 Question Id : 87827036097 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Certain books are bought at prices ranging from ₹ 400 to ₹ 500 per book and are sold at prices ranging from ₹ 500 to ₹ 700 per book. Find the greatest possible profit that might be made in selling 10 books.

(1) ₹ 4000

(2) ₹ 3000

(3) ₹ 3800

(4) ₹ 7000

Options :

878270141921. 1

878270141922. 2

878270141923. 3

878270141924. 4

Question Number : 21 Question Id : 87827036097 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

कुछ पुस्तकें ₹ 400 से ₹ 500 प्रति पुस्तक तक की कीमतों पर खरीदी जाती है और ₹ 500 से ₹ 700 तक कीमतों पर उनकी बिक्री की जाती है। 10 पुस्तकों की बिक्री में होने वाला संभव अधिकतम लाभ ज्ञात कीजिए।

(1) ₹ 4000
(2) ₹ 3000
(3) ₹ 3800
(4) ₹ 7000

Options :

878270141921. 1

878270141922. 2

878270141923. 3

878270141924. 4

Question Number : 22 Question Id : 87827036098 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A woman, while introducing a man, says "His wife is the only daughter of my father". How is that man related to the woman ?

(1) Father in law
(2) Brother in law
(3) Husband
(4) Brother

Options :

878270141925. 1

878270141926. 2

878270141927. 3

878270141928. 4

Question Number : 22 Question Id : 87827036098 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

एक महिला, एक आदमी का परिचय देते हुए बताती है, ''इसकी पत्नी मेरे पिता की एकलौती बेटी है।'' उस आदमी का महिला से कैसा संबंध है?

(1) ससुर

(2) बहनोई/साला

(3) पति

(4) भाई

Options :

878270141925. 1

878270141926. 2

878270141927. 3

878270141928. 4

Question Number : 23 Question Id : 87827036099 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Find the number that can replace question mark (?) in the series given below.
1, 3, 2, 5, 3, 7, 4, 9, 5, 11, 6, 13 ?

(1) 15

(2) 7

(3) 19

(4) 8

Options :

878270141929. 1

878270141930. 2

878270141931. 3

878270141932. 4

Question Number : 23 Question Id : 87827036099 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

नीचे दी गई श्रृंखला में प्रश्नवाचक चिह्न (?) को प्रतिस्थापित कर सकने वाली संख्या ज्ञात कीजिए ?

1, 3, 2, 5, 3, 7, 4, 9, 5, 11, 6, 13 ?

(1) 15
(2) 7
(3) 19
(4) 8

Options :

878270141929. 1

878270141930. 2

878270141931. 3

878270141932. 4

Question Number : 24 Question Id : 87827036100 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In a certain code :

(a) '3245' means 'you must study hard'
(b) '567' means 'hard work pays'
(c) '614' means 'work and study'

Which of the following are the codes for 'pays' and 'work' respectively ?

Choose the **correct** answer from the options given below :

(1) 1 & 5
(2) 5 & 6
(3) 7 & 6
(4) 4 & 5

Options :

878270141933. 1

878270141934. 2

878270141935. 3

878270141936. 4

Question Number : 24 Question Id : 87827036100 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

एक निश्चित कूट में :

(a) '3245' का अर्थ है 'यू मस्ट स्टडी हार्ड'

(b) '567' का अर्थ है 'हार्ड वर्क पेज़'

(c) '614' का अर्थ है 'वर्क एण्ड स्टडी'

निम्नलिखित में 'पेज़' और 'वर्क' के क्रमशः कूट कौन से हैं?

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) 1 और 5

(2) 5 और 6

(3) 7 और 6

(4) 4 और 5

Options :

878270141933. 1

878270141934. 2

878270141935. 3

878270141936. 4

Question Number : 25 Question Id : 87827036101 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A policeman goes 20 meters towards South and then turns to his right and walks 40 meters. He again turns to his left and walks 10 meters. How far is he now from his starting point ?

(1) 37.5 meters

(2) 50 meters

(3) $30\sqrt{2}$ meters

(4) 40 meters

Options :

878270141937. 1

878270141938. 2

878270141939. 3

878270141940. 4

Question Number : 25 Question Id : 87827036101 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

एक पुलिसमैन दक्षिण की ओर 20 मीटर चलता है और फिर अपने दाहिने ओर मुड़ता है और 40 मीटर चलता है वह पुन: अपनी बाई ओर मुड़ता है ओर 10 मीटर चलता है। वह अपने आरंभिक बिंदु से कितनी दूर पर है ?

(1) 37.5 मीटर

(2) 50 मीटर

(3) $30\sqrt{2}$ मीटर

(4) 40 मीटर

Options :

878270141937. 1

878270141938. 2

878270141939. 3

878270141940. 4

Question Number : 26 Question Id : 87827036102 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If the statement - "No professors are materialists" is given as true, then which of the following statements could be inferred to be true ?

(1) All professors are materialists.
(2) Some professors are materialists.
(3) Some professors are not materialists.
(4) Some materialists are professors.

Options :

878270141941. 1

878270141942. 2

878270141943. 3

878270141944. 4

Question Number : 26 Question Id : 87827036102 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

यदि 'कोई भी प्राध्यापक भौतिकवादी नहीं है।' कथन को सही माना गया है तो निम्न लिखित में कौन-से कथन का सही होने का अनुमान लगाया जा सकता है?

(1) सभी प्राध्यापक भौतिकवादी हैं।
(2) कुछ प्राध्यापक भौतिकवादी हैं।
(3) कुछ प्राध्यापक भौतिकवादी नहीं है।
(4) कुछ भौतिकवादी प्राध्यापक हैं।

Options :

878270141941. 1

878270141942. 2

878270141943. 3

878270141944. 4

Question Number : 27 Question Id : 87827036103 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following statements is logically equivalent to the statement- "No professors are materialists" ?

(1) Some non-materialists are not non-professors
(2) Some professors are non-materialists
(3) All professors are non-materialists
(4) All non-materialists are non-professors

Options :

878270141945. 1

878270141946. 2

878270141947. 3

878270141948. 4

Question Number : 27 Question Id : 87827036103 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

निम्नलिखित में कौन-सा कथन तार्किक रूप से ''कोई प्राध्यापक भौतिकवादी नहीं है'' कथन के समतुल्य है?

(1) कुछ गैर-भौतिकवादी गैर-प्राध्यापक नहीं हैं।
(2) कुछ प्राध्यापक गैर-भौतिकवादी हैं।
(3) सभी प्राध्यापक गैर-भौतिकवादी हैं।
(4) सभी गैर-भौतिकवादी गैर-प्राध्यापक हैं।

Options :

878270141945. 1

878270141946. 2

878270141947. 3

878270141948. 4

Question Number : 28 Question Id : 87827036104 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following propositions are so related that they cannot both be true, although they can both be false ?

(A) No professors are materialists

(B) Some professors are materialists

(C) All professors are materialists

(D) Some professors are not materialists

Choose the **correct** answer from the options given below :

(1) (A) and (C) Only

(2) (B) and (D) Only

(3) (B) and (C) Only

(4) (A) and (D) Only

Options :

878270141949. 1

878270141950. 2

878270141951. 3

878270141952. 4

Question Number : 28 Question Id : 87827036104 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

निम्नलिखित में कौन-सी प्रतिज्ञप्तियाँ इस प्रकार से संबंधित है कि वे दोनों सही नहीं हो सकती हैं यद्यपि वे दोनों गलत हो सकती हैं?

(A) कोई प्राध्यापक भौतिकवादी नहीं हैं।

(B) कुछ प्राध्यापक भौतिकवादी हैं।

(C) सभी प्राध्यापक भौतिकवादी हैं।

(D) कुछ प्राध्यापक भौतिकवादी नहीं हैं।

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A) और (C)

(2) केवल (B) और (D)

(3) केवल (B) और (C)

(4) केवल (A) और (D)

Options :

878270141949. 1

878270141950. 2

878270141951. 3

878270141952. 4

Question Number : 29 Question Id : 87827036105 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

"To solve our transportation problems, we have to put more money into production of bicycles. The CEO of ABCD Company limited says so. "Which of the following fallacy is committed in the above argument ?

(1) Slippery Slope

(2) Appeal to Inappropriate Authority

(3) Ad Hominem

(4) Hasty Generalisation

Options :

878270141953. 1

878270141954. 2

878270141955. 3

878270141956. 4

Question Number : 29 Question Id : 87827036105 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

''अपनी यातायात/परिवहन की समस्याओं के समाधान हेतु हमें साइकिल के बड़े पैमाने पर उत्पादन के लिए ओर अधिक धन लगाना होगा। ए बी सी डी कंपनी लिमिटेड के सी ई ओ ऐसा कहते हैं।'' उपर्युक्त युक्ति में निम्नलिखित में से कौन-सा तर्क दोष किया गया है?

(1) फिसलनयुक्त ढलान

(2) अनुपयुक्त प्राधिकार का आग्रह

(3) व्यक्ति विशेष के लिए

(4) अविचारित सामान्यीकरण

Options :

878270141953. 1

878270141954. 2

878270141955. 3

878270141956. 4

Question Number : 30 Question Id : 87827036106 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

According to Classical Indian School of logic (Nyāya) which fallacy is committed in the following statement ?

"The sky rose is fragrant, because it is a rose like the rose on the earth".

(1) Asādhārana

(2) Bādhita

(3) Viruddha

(4) Āśrayā siddha

Options :

878270141957. 1

878270141958. 2

878270141959. 3

878270141960. 4

Question Number : 30 Question Id : 87827036106 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

भारतीय शास्त्रीय न्याय तर्क मत के अनुसार निम्नलिखित कथन में कौन सा तर्क दोष किया गया है?
''आकाश गुलाब सुगंधित है क्योंकि यह पृथ्वी के गुलाब के समान एक गुलाब है''

(1) असाधारण
(2) बाधित
(3) विरुद्ध
(4) आश्रय सिद्ध

Options :

878270141957. 1

878270141958. 2

878270141959. 3

878270141960. 4

Question Number : 31 Question Id : 87827036107 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following pair of acronym and its expansion are incorrectly matched ?

(1) LED - Light Emitting Diode
(2) CRT - Cathode Ray Tube
(3) LCD - Liquid Control Display
(4) VDU - Video Display Unit

Options :

878270141961. 1

878270141962. 2

878270141963. 3

878270141964. 4

Question Number : 31 Question Id : 87827036107 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

निम्नलिखित परिवर्णी शब्द एवं उसके विस्तार का कौन सा युग्म गलत रूप से सुमेलित है?

(1) एल ई डी — लाइट एमिटिंग डायोड

(2) सी आर टी — कैथोड रे ट्यूब

(3) एल सी डी — लिक्विड कंट्रोल डिस्प्ले

(4) वी डी यू — वीडियो डिस्प्ले यूनिट

Options :

878270141961. 1

878270141962. 2

878270141963. 3

878270141964. 4

Question Number : 32 Question Id : 87827036108 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Businesses use ICT to build positive customer relations by :

(1) Calling customers at home

(2) Creating targeted marketing campaigns

(3) Placing pop-up advertisements on web sites

(4) Sending unsolicited e-mails

Options :

878270141965. 1

878270141966. 2

878270141967. 3

878270141968. 4

Question Number : 32 Question Id : 87827036108 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

निम्नलिखित में से किस विधि से व्यवसाय सकारात्मक ग्राहक संबंध निर्मित करने के लिए आई सी टी का प्रयोग करते हैं?

(1) ग्राहकों को घर बुलाना

(2) लक्ष्यित विपणन अभियान बनाना

(3) वेबसाइटों पर पॉप-अप विज्ञापन देना

(4) अयाचित ई-मेल भेजना

Options :

878270141965. 1

878270141966. 2

878270141967. 3

878270141968. 4

Question Number : 33 Question Id : 87827036109 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements :

Statement I : $(25)_{16} = (00100101)_2$

Statement II : $(00011011)_2 = (1B)_{16}$

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **Statement I** and **Statement II** are correct

(2) Both **Statement I** and **Statement II** are incorrect

(3) **Statement I** is correct but **Statement II** is incorrect

(4) **Statement I** is incorrect but **Statement II** is correct

Options :

878270141969. 1

878270141970. 2

878270141971. 3

878270141972. 4

Question Number : 33 Question Id : 87827036109 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

नीचे दो कथन दिए गए हैं :

कथन I : $(25)_{16} = (00100101)_2$

कथन II : $(00011011)_2 = (1B)_{16}$

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से **सही उत्तर** चयन कीजिए :

(1) **कथन I** और **कथन II** दोनों सत्य हैं।

(2) **कथन I** और **कथन II** दोनों असत्य हैं।

(3) **कथन I** सत्य है, लेकिन **कथन II** असत्य है।

(4) **कथन I** असत्य है, लेकिन **कथन II** सत्य है।

Options :

878270141969. 1

878270141970. 2

878270141971. 3

878270141972. 4

Question Number : 34 Question Id : 87827036110 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following statements is/are true ?

(A) BIOS is an example of Application Software

(B) A utility software is an example of firmware

(C) Spyware is an example of malware

Choose the **correct** answer from the options given below :

(1) (A) Only

(2) (B) Only

(3) (C) Only

(4) (B) and (C) Only

Options :

878270141973. 1

878270141974. 2

878270141975. 3

878270141976. 4

Question Number : 34 Question Id : 87827036110 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

निम्नलिखित में से कौन-सा/से कथन सही है/हैं ?

(A) बायोस (BIOS) अप्लीकेशन साफ्टवेयर का एक उदाहरण है

(B) उपयोगिता साफ्टवेयर फर्मवेयर का एक उदाहरण हे

(C) स्पाईवेयर मालवेयर का एक उदाहरण है

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A)

(2) केवल (B)

(3) केवल (C)

(4) केवल (B) और (C)

Options :

878270141973. 1

878270141974. 2

878270141975. 3

878270141976. 4

Question Number : 35 Question Id : 87827036111 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following statements regarding guided and unguided media in computer Networking are correct ?

(A) Guided media transmission supports higher data speeds than unguided media transmission

(B) Guided media is subjected to less interference than unguided media

(C) Unguided media transmission is more secure than guided media transmission

Choose the **correct** answer from the options given below :

(1) (A) and (B) Only

(2) (A) and (C) Only

(3) (B) and (C) Only

(4) (A), (B) and (C)

Options :

878270141977. 1

878270141978. 2

878270141979. 3

878270141980. 4

Question Number : 35 Question Id : 87827036111 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

कंप्यूटर नेटवर्किंग में निर्देशित एवं अनिर्देशित मीडिया के संबंध में निम्नलिखित में से कौन से कथन सही हैं?

(A) निर्देशित मीडिया संचरण अनिर्देशित मीडिया संचरण की तुलना में उच्च डाटा स्पीड का अनुसमर्थन करता है।

(B) निर्देशित मीडिया में अनिर्देशित मीडिया की तुलना में कम हस्तक्षेप होता है।

(C) अनिर्देशित मीडिया संचरण निर्देशित मीडिया संचरण की तुलना में अधिक सुरक्षित होता है।

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A) और (B)

(2) केवल (A) और (C)

(3) केवल (B) और (C)

(4) (A), (B) और (C)

Options :

878270141977. 1

878270141978. 2

878270141979. 3

878270141980. 4

Question Number : 36 Question Id : 87827036112 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following statements are true about hardness in water ?

(A) It is caused by ions of calcium and magnesium

(B) It is of two types-temporary and permanent

(C) Permanent hardness can easily be removed by heating the water

(D) Hardness causes scales in hot water pipe systems

(E) Hardness decreases the soap consumption

Choose the **correct** answer from the options given below :

(1) (A), (B), (C) and (D) Only

(2) (A), (B) and (D) Only

(3) (B), (C), (D) and (E) Only

(4) (C), (D) and (E) Only

Options :

878270141981. 1

878270141982. 2

878270141983. 3

878270141984. 4

Question Number : 36 Question Id : 87827036112 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

जल में कठोरता के विषय में कौन से कथन सत्य हैं?

(A) यह कैलशियम तथा मैगनेशियम के आयनों के कारण होती है।

(B) यह दो तरह की होती है–अस्थायी तथा स्थायी।

(C) जल की स्थायी कठोरता जल को गरम कर आसानी से दूर की जा सकती है।

(D) यह गरमजल पाईप प्रणाली में पपड़ी पैदा करती है।

(E) यह साबुन की खपत को कम करती है।

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A), (B), (C) और (D)

(2) केवल (A), (B) और (D)

(3) केवल (B), (C), (D) और (E)

(4) केवल (C), (D) और (E)

Options :

878270141981. 1

878270141982. 2

878270141983. 3

878270141984. 4

Question Number : 37 Question Id : 87827036113 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

What is the full form of CBOD ?

(1) Comparative Biochemical Oxygen Demand

(2) Common Biochemical Oxygen Demand

(3) Carbonaceous Biochemical Oxygen Demand

(4) Classified Biochemical Oxygen Demand

Options :

878270141985. 1

878270141986. 2

878270141987. 3

878270141988. 4

Question Number : 37 Question Id : 87827036113 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

सी.बी.ओ.डी (CBOD) का पूर्ण रूप क्या है?

(1) कम्पेरेटिव बायोकेमिकल आक्सीजन डिमांड

(2) कॉमन बायोकेमिकल आक्सीजन डिमांड

(3) कार्बोनेशियस बायोकेमिकल आक्सीजन डिमांड

(4) क्लासीफाइड बायोकेमिकल आक्सीजन डिमांड

Options :

878270141985. 1

878270141986. 2

878270141987. 3

878270141988. 4

Question Number : 38 Question Id : 87827036114 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements :

Statement I : RSPM are those suspended particulate matters (SPM) whose aerodynamic diameter is more than 10 micron.

Statement II : Fine particles are those SPM whose aerodynamic diameter is less than 2.5 micron.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **Statement I** and **Statement II** are correct

(2) Both **Statement I** and **Statement II** are incorrect

(3) **Statement I** is correct but **Statement II** is incorrect

(4) **Statement I** is incorrect but **Statement II** is correct

Options :

878270141989. 1

878270141990. 2

878270141991. 3

878270141992. 4

Question Number : 38 Question Id : 87827036114 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

नीचे दो कथन दिए गए हैं :

कथन I : आर एस पी एम (RSPM) वैसे निलम्बित कणकीय (पार्टिकूलेट) पदार्थ (मैटर) (SPM) हैं जिनका वायुगतिकी डायमीटर (एरोडायनेमिक डायमीटर) 10 माइक्रोन से अधिक होता है।

कथन II : सूक्ष्म कण वैसे एस पी एम (SPM) होते हैं जिनका वायुगतिकी डायमीटर 2.5 माइक्रोन से कम होता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से **सही उत्तर** चयन कीजिए :

(1) **कथन I** और **कथन II** दोनों सत्य हैं।

(2) **कथन I** और **कथन II** दोनों असत्य हैं।

(3) **कथन I** सत्य है, लेकिन **कथन II** असत्य है।

(4) **कथन I** असत्य है, लेकिन **कथन II** सत्य है।

Options :

878270141989. 1

878270141990. 2

878270141991. 3

878270141992. 4

Question Number : 39 Question Id : 87827036115 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which one of the following is responsible for the negative radiative forcing or cooling of the atmosphere ?

(1) Water vapour
(2) Tropospheric Ozone
(3) Stratospheric Ozone
(4) Black carbon

Options :

878270141993. 1

878270141994. 2

878270141995. 3

878270141996. 4

Question Number : 39 Question Id : 87827036115 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

निम्नलिखित में से कौन वायुमण्डल के नकारात्मक विकिरण प्रणोदय (रेडियेटिव फोर्सिंग) अथवा शीतलन के लिए उत्तरदायी है?

(1) जल वाष्प
(2) क्षोभमंडलीय ओजोन
(3) समतापमंडलीय ओजोन
(4) ब्लैक कार्बन

Options :

878270141993. 1

878270141994. 2

878270141995. 3

878270141996. 4

Question Number : 40 Question Id : 87827036116 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements :

Statement I : Montreal protocol is a multi-lateral environmental agreement that regulates the production and consumption of nearly 100 man made chemicals.

Statement II : Montreal protocal is an international treaty designed to protect the environment.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **Statement I** and **Statement II** are correct

(2) Both **Statement I** and **Statement II** are incorrect

(3) **Statement I** is correct but **Statement II** is incorrect

(4) **Statement I** is incorrect but **Statement II** is correct

Options :

878270141997. 1

878270141998. 2

878270141999. 3

878270142000. 4

Question Number : 40 Question Id : 87827036116 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

नीचे दो कथन दिए गए हैं :

कथन I : मॉन्ट्रीयल प्रोटोकॉल एक बहुपक्षीय पर्यावरणीय समझौता है जो लगभग 100 मानव निर्मित रसायनों के उत्पादन तथा खपत को विनियमित करता है।

कथन II : मॉन्ट्रीयल प्रोटोकॉल पर्यावरण को सुरक्षित रखने के लिए अभिकल्पित एक अंन्तर्राष्ट्रीय संधि है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से **सही उत्तर** चयन कीजिए :

(1) **कथन I** और **कथन II** दोनों सत्य हैं।

(2) **कथन I** और **कथन II** दोनों असत्य हैं।

(3) **कथन I** सत्य है, लेकिन **कथन II** असत्य है।

(4) **कथन I** असत्य है, लेकिन **कथन II** सत्य है।

Options :

878270141997. 1

878270141998. 2

878270141999. 3

878270142000. 4

Question Number : 41 Question Id : 87827036117 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The first Indian Universities Commission (1902) was headed by :

(1) Gurudas Bannerjee
(2) Syed Hasan Bilgrami
(3) William Adam
(4) Thomas Raleigh

Options :

878270142001. 1

878270142002. 2

878270142003. 3

878270142004. 4

Question Number : 41 Question Id : 87827036117 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

प्रथम भारतीय विश्वविद्यालय आयोग (1902) के अध्यक्ष कौन थे?

(1) गुरूदास बैनर्जी
(2) सैयद हसन बिलग्रामी
(3) विलियम एडम
(4) टॉमस रैले

Options :

878270142001. 1

878270142002. 2

878270142003. 3

878270142004. 4

Question Number : 42 Question Id : 87827036118 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following were established during the rule of East India company in India ?

(A) St. Stephen's College, Delhi

(B) Hislop College, Nagpur

(C) Fort William College, Calcutta

(D) Serampore College, Serampore

(E) Poona Sanskrit College, Pune

Choose the **correct** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (B), (C) and (D) Only

(3) (A), (B) and (E) Only

(4) (C), (D) and (E) Only

Options :

878270142005. 1

878270142006. 2

878270142007. 3

878270142008. 4

Question Number : 42 Question Id : 87827036118 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

भारत में ईस्ट ऑफ इंडिया कंपनी के शासनकाल में निम्नलिखित में से किसकी स्थापना हुई थी?

(A) सेंट स्टेफिन्स कॉलेज, दिल्ली

(B) हिसलोप कॉलेज, नागपुर

(C) फोर्ट विलियम कॉलेज, कलकत्ता

(D) सेरमपुर कॉलेज, सेरमपुर

(E) पूना संस्कृत कॉलेज, पुणे

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A), (B) और (C)

(2) केवल (B), (C) और (D)

(3) केवल (A), (B) और (E)

(4) केवल (C), (D) और (E)

Options :

878270142005. 1

878270142006. 2

878270142007. 3

878270142008. 4

Question Number : 43 Question Id : 87827036119 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I (Committee/Commission)		**List - II (Chairman)**
(A)	Scientific Manpower Committee (1947)	(I)	K.L. Shrimali
(B)	Committee on Higher Education in rural areas	(II)	S.S. Bhatnagar
(C)	Committee on Model Act for universities, 1961	(III)	Sunith kumar chatterji
(D)	Sanskrit Commission	(IV)	D.S Kothari

Choose the **correct** answer from the options given below :

(1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(2) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

(3) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

Options :

878270142009. 1

878270142010. 2

878270142011. 3

878270142012. 4

Question Number : 43 Question Id : 87827036119 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

सूची-I से सूची-II का मिलान कीजिए:

सूची-I (समिति/आयोग)	सूची-II (अध्यक्ष)
(A) वैज्ञानिक जनशक्ति समिति (1947)	(I) के.एल. श्रीमाली
(B) ग्रामीण क्षेत्रों में उच्चतर शिक्षा संबंधी समिति	(II) एस.एस. भटनागर
(C) विश्वविद्यालयों के लिए मानक अधिनियम संबंधी समिति, 1961	(III) सुनित कुमार चैटर्जी
(D) संस्कृत आयोग	(IV) डी.एस. कोठारी

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
(2) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)
(3) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
(4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

Options :

878270142009. 1

878270142010. 2

878270142011. 3

878270142012. 4

Question Number : 44 Question Id : 87827036120 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements :

Statement I : The ancient university of Sridhanya katak was situated on the banks of river Yamuna.

Statement II : Sridhanya katak attained celebrity as the seat of both Brahmanical and Buddhist learning during the time of Siddha Nagarjuna.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **Statement I** and **Statement II** are correct

(2) Both **Statement I** and **Statement II** are incorrect

(3) **Statement I** is correct but **Statement II** is incorrect

(4) **Statement I** is incorrect but **Statement II** is correct

Options :

878270142013. 1

878270142014. 2

878270142015. 3

878270142016. 4

Question Number : 44 Question Id : 87827036120 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

नीचे दो कथन दिए गए हैं :

कथन I : प्राचीन श्रीधन्य कटक विश्वविद्यालय यमुना नदी के किनारे पर स्थित था।

कथन II : सिद्ध नागर्जुन के काल में श्रीधन्य कटक को ब्राह्मणवादी और बौद्ध शिक्षा दोनों की पीठों के रूप में ख्याति प्राप्त हुई।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से **सही उत्तर** चयन कीजिए :

(1) **कथन I** और **कथन II** दोनों सत्य हैं।

(2) **कथन I** और **कथन II** दोनों असत्य हैं।

(3) **कथन I** सत्य है, लेकिन **कथन II** असत्य है।

(4) **कथन I** असत्य है, लेकिन **कथन II** सत्य है।

Options :

878270142013. 1

878270142014. 2

878270142015. 3

878270142016. 4

Question Number : 45 Question Id : 87827036121 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In 1948, under whose chaipersonship a University Commission was appointed with the purpose of reconstruction of university education to meet the demand for scientific, technical and other manpower needed for the socio-economic development of the country ?

(1) Dr. Zakir Husain
(2) Dr. S. Radhakrishnan
(3) Dr. A.L Mudaliar
(4) Dr. D.S. Kothari

Options :

878270142017. 1

878270142018. 2

878270142019. 3

878270142020. 4

Question Number : 45 Question Id : 87827036121 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

देश के सामाजिक - आर्थिक विकास के लिए अपेक्षित वैज्ञानिक, तकनीकी तथा जनशक्ति की मांग को पूरा करने के लिए 1948 में किसकी अध्यक्षता में विश्वविद्यालय शिक्षा के पुनर्गठन के उद्देश्य से विश्वविद्यालय आयोग की नियुक्ति हुई थी ?

(1) डॉ. जाकिर हुसैन
(2) डॉ. एस. राधाकृष्णन
(3) डॉ. ए.एल. मुदैलियर
(4) डॉ. डी.एस. कोठारी

Options :

878270142017. 1

878270142018. 2

878270142019. 3

878270142020. 4

Sub-Section Number :	3
Sub-Section Id :	8782701526
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Id : 87827036122 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (46 to 50)

Question Label : Comprehension

Read the passage and answer the questions that follow :

Project Tiger turned 50 years recently. An often repeated headline was how the numbers have increased from 2,967 individuals in 2018 to 3,167 in 2022. This hides the bitter truth : Indians aren't going to compromise Western lifestyles for the survival of the Tiger. Most middle class Indians would loathe to give up their second, investment home or driving to the hills on a multilaned highway for the national animal.

You also can't change the needs of a tiger - it is a large, solitary animal. A female tiger needs about 15 square kilometres with a good prey base. If she reproduces, those cubs will require additional space. Data shows 30% of the tigers live outside protected areas, i.e in our midst. The more we fragment their habitat with urbanization, highways and industrial parks, the more they will be forced into unprotected areas.

Let's modify our approach. I advocate of three results by the 75th anniversary of project Tiger. First, instead of endlessly increasing tiger population, India can identify and achieve a metric, not much higher than the current numbers. Remember, 1000 tigers already roam around in farms and villages, more will be a disaster. Second, let's better protect what we have. Keeping protected tiger habitat undisturbed is key. Investment in keeping unprotected ecosystems intact should be financially viable and part of Corporate Social Responsibility (CSR) and more. Third, reducing confrontation with humans is essential. Monitoring and communications technology are key to this. Compensation for live stock killed must be rapidly assessed and pegged to market rates. For the next quarter century, let's think quality.

Sub questions

Question Number : 46 Question Id : 87827036123 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Over the last few years, the population of the tiger has :
(1) Decreased
(2) Remained static
(3) Increased
(4) Declined substantially

Options :

878270142021. 1

878270142022. 2

878270142023. 3

878270142024. 4

Question Number : 47 Question Id : 87827036124 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

An increase in tiger population will result in :
(1) Tigers killing each other
(2) Tigers dying
(3) Tigers posing a threat to the farms and villages nearly
(4) Tigers eating their own cubs

Options :

878270142025. 1

878270142026. 2

878270142027. 3

878270142028. 4

Question Number : 48 Question Id : 87827036125 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

"The bitter truth" refers to :
(1) Tigers living outside protected areas
(2) Human killing tigers
(3) The conflicting needs of human beings and tigers
(4) Tigers killing human beings

Options :

878270142029. 1

878270142030. 2

878270142031. 3

878270142032. 4

Question Number : 49 Question Id : 87827036126 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

According to the writer, one of the aims of project Tiger in the next quarter century should be :
(1) Increasing tiger population
(2) Training the tigers to live in a contained area
(3) Protecting the existing tiger population
(4) Ensuring that the government stops building highways

Options :

878270142033. 1

878270142034. 2

878270142035. 3

878270142036. 4

Question Number : 50 Question Id : 87827036127 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

According to the writer, the 75th Anniversary of project Tiger should not aim at the following :

(A) Keep the protected habitats intact

(B) Keep the tiger population about the same as at present

(C) Live stock killed by tigers should be adequately compensated for

(D) Focus on quantity instead of quality

Choose the **correct** answer from the options given below :

(1) (A) and (B) Only

(2) (B), (C) and (D) Only

(3) (C) and (D) Only

(4) (D) Only

Options :

878270142037. 1

878270142038. 2

878270142039. 3

878270142040. 4

Question Id : 87827036122 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (46 to 50)

Question Label : Comprehension

नीचे दिए गद्यांश को पढ़िए एवं उन पर आधारित प्रश्नों के उत्तर दीजिए :

प्रोजेक्ट टाइगर ने हाल ही में पचास वर्ष पूरे किए हैं। इस अवसर पर यह मुख्य समाचार बार-बार दर्शाया गया कि वर्ष 2018 में इन बाघों की संख्या जो कि 2,967 थी, वह वर्ष 2022 में कैसे 3,167 हो गयी। यह उस कड़वे सच को छुपाता है : भारत के लोग बाधों को बचाने हेतु अपनी पश्चिमी जीवन शैली से किसी प्रकार का समझौता नहीं करने को तैयार हैं। अधिकांश मध्यवर्गीय भारतीय अपने दूसरे निवेश गृह अथवा राष्ट्रीय पशु हेतु बहु-पथ वाले राजमार्ग पर स्थित पहाड़ी की ओर ड्राइविंग की आदत को छोड़ना पसंद नहीं करेंगे।

आप बाघ की आवश्यकताओं (जरूरतों) में परिवर्तन भी नहीं कर सकते - क्योंकि यह एक बृहत, एकचर पशु है। किसी बाघिन को अच्छी तरह के आखेट आधार वाले करीब 15 वर्ग किलोमीटर जगह की आवश्यकता होती है। यदि वह बच्चे पैदा करती है तो उन शावकों को अतिरिक्त जगह (स्थान) की आवश्यकता होगी। आकड़े यह प्रदर्शित करते हैं कि बाघों की 30 प्रतिशत संख्या संरक्षित क्षेत्रों के बाहर अर्थात हमारे बीच रहती है। शहरीकरण, राजमार्गों एवं औद्योगिक पार्कों के द्वारा हम जितना उनके अधिवास स्थलों को खण्डित करते जाएंगे, वे उतना ही असंरक्षित क्षेत्रों की ओर जाने को बाध्य होंगे।

हमें अपनी सोच में बदलाव लाना होगा। मैं प्रोजेक्ट टाइगर के 75 वीं वर्षगांठ तक इन तीन परिणामों को प्राप्त करने की वकालत करता हूँ। प्रथम, बाघों की संख्या में बेलगाम वृद्धि के बजाय, भारत वर्तमान संख्या से ज्यादा अधिक न होने वाली मीट्रिक (मापन) की पहचान और इसे प्राप्त कर सकता है। स्मरण रहे, खेतों एवं गाँवों में लगभग 1000 बाघ घूम रहे हैं, इससे अधिक हो जाने पर यह आपदा बन जाएगी। दूसरा, जो हमारे पास है उसे बेहतर संरक्षित बनाना। संरक्षित बाघ अधिवास को अबाधित रखना महत्वपूर्ण है। असुरक्षित पारिस्थितिकी तंत्र को अक्षुण बनाए रखने में होने वाले निवेश को ध्यान में रखना वित्तीय दृष्टि से व्यावहारिक और यह सी.एस.आर. जैसे अन्य कार्यक्रमों का हिस्सा होना चाहिये। तीसरा, मनुष्यों के साथ होने वाले संघर्ष को कम करना अत्यावश्यक है। इसमें अनुवीक्षण (मॉनिटरिंग) एवं संचार महत्वपूर्ण हिस्सा हैं। मारे गए पशुधन के बदले में दिए जाने वाले मुआबजे का शीघ्र मूल्यांकन किया जाय ओर मुआबजा बाजार दर पर दिया जाय। आगामी 25 वर्षों में हमें गुणवत्ता पर विचार करना होगा।

Sub questions

Question Number : 46 Question Id : 87827036123 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

पिछले कुछ वर्षों में बाघों की संख्या में :

(1) कमी आयी है

(2) स्थिर बनी हुई है

(3) वृद्धि हुई है

(4) भारी गिरावट आयी है

Options :

878270142021. 1

878270142022. 2

878270142023. 3

878270142024. 4

Question Number : 47 Question Id : 87827036124 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

बाघों की संख्या में वृद्धि का परिणाम होगा :

(1) बाघ आपस में एक – दूसरे को मार देंगे।

(2) बाघ मर जाएंगे।

(3) बाघ निकटवर्ती खेतों एवं गाँवों के लिए खतरा बन जाएंगे।

(4) बाघ अपने स्वयं के शावकों (बच्चों) को खा जाएंगे।

Options :

878270142025. 1

878270142026. 2

878270142027. 3

878270142028. 4

Question Number : 48 Question Id : 87827036125 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

''कटु सत्य'' निम्नलिखित में किसको संदर्भित करता है ?

(1) बाघों के संरक्षित क्षेत्रों से बाहर रहने को

(2) मनुष्यों द्वारा बाघों की हत्या को

(3) मानव एवं बाघों की परस्पर विरोधी आवश्यकताओं को

(4) बाघों द्वारा मनुष्यों की हत्या को

Options :

878270142029. 1

878270142030. 2

878270142031. 3

878270142032. 4

Question Number : 49 Question Id : 87827036126 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

लेखक के अनुसार शताब्दी के आगामी चतुर्थांश में प्रोजेक्ट टाइगर का निम्नलिखित कौन सा एक उद्देश्य होना चाहिए?

(1) बाघ की संख्या में वृद्धि करना

(2) बाघों को निरोधित (स्वनिहित) क्षेत्र में रहने हेतु प्रशिक्षण देना।

(3) बाघ की वर्तमान संख्या को संरक्षित करना

(4) यह सुनिश्चित करना कि सरकार राजमार्गों के निर्माण कार्य को बंद कर दे।

Options :

878270142033. 1

878270142034. 2

878270142035. 3

878270142036. 4

Question Number : 50 Question Id : 87827036127 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

लेखक के अनुसार प्रोजेक्ट टाइगर की 75 वीं वर्ष गाँठ पर निम्नलिखित में से क्या-क्या उद्देश्य नहीं होने चाहिए?

(A) संरक्षित अधिवासों को अक्षुण बनाए रखना।

(B) बाघों की संख्या को लगभग वर्तमान स्तर पर बनाए रखना।

(C) बाघों द्वारा मारे गए पशुधनों के लिए पर्याप्त मुवाबजा देना चाहिए।

(D) गुणवत्ता के बजाय संख्या (मात्रा) पर ध्यान केन्द्रित करना।

नीचे दिए गए विकल्पों में से **सही उत्तर** का चयन कीजिए :

(1) केवल (A) और (B)

(2) केवल (B), (C) और (D)

(3) केवल (C) और (D)

(4) केवल (D)

Options :

878270142037. 1

878270142038. 2

878270142039. 3

878270142040. 4

Electronic Science

Section Id :	878270877
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	92
Number of Questions to be attempted :	92
Section Marks :	200
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1

Sub-Section Id :	8782701527
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 51 Question Id : 87827036128 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The most common kind of area defect found in silicon is the _____ and it always occur along _____ plane.

(1) Stacking fault, 111
(2) Extrinsic fault, 110
(3) Stacking fault, 100
(4) Extrinsic fault, 111

Options :

878270142041. 1

878270142042. 2

878270142043. 3

878270142044. 4

Question Number : 51 Question Id : 87827036128 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The most common kind of area defect found in silicon is the _____ and it always occur along _____ plane.

(1) Stacking fault, 111
(2) Extrinsic fault, 110
(3) Stacking fault, 100
(4) Extrinsic fault, 111

Options :

878270142041. 1

878270142042. 2

878270142043. 3

878270142044. 4

Question Number : 52 Question Id : 87827036129 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

An important figure of merit for microwave application of Schottky diode is forward bias cut off frequency f_{co} and is given by :

(1) $\frac{1}{2\pi R_F^2 C_F^2}$

(2) $\frac{1}{\pi R_F^2 C_F^2}$

(3) $\frac{1}{2\pi R_F C_F}$

(4) $\frac{1}{2\pi R_F^2 C}$

Options :

878270142045. 1

878270142046. 2

878270142047. 3

878270142048. 4

Question Number : 52 Question Id : 87827036129 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

An important figure of merit for microwave application of Schottky diode is forward bias cut off frequency f_{co} and is given by :

(1) $\frac{1}{2\pi R_F^2 C_F^2}$

(2) $\frac{1}{\pi R_F^2 C_F^2}$

(3) $\frac{1}{2\pi R_F C_F}$

(4) $\frac{1}{2\pi R_F^2 C}$

Options :

878270142045. 1

878270142046. 2

878270142047. 3

878270142048. 4

Question Number : 53 Question Id : 87827036130 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In MOSFET, the carrier velocity between constant mobility regime and the saturation velocity can be described as :

(1) $\frac{\mu_n E}{\left[1+\left(\frac{\mu_n E}{v_s}\right)^n\right]^{1/n}}$

(2) $\frac{E}{\left[1+\left(\frac{\mu_n E}{v_s}\right)^n\right]^{n}}$

(3) $\frac{\mu_n}{\left[1+\frac{\mu_n E}{v_s}\right]^{1/n}}$

(4) $\frac{\mu_n E}{\left[1-\left(\frac{\mu_n E}{v_s}\right)^n\right]^{1/n}}$

Options :

878270142049. 1

878270142050. 2

878270142051. 3

878270142052. 4

Question Number : 53 Question Id : 87827036130 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In MOSFET, the carrier velocity between constant mobility regime and the saturation velocity can be described as :

(1) $\frac{\mu_n E}{\left[1+\left(\frac{\mu_n E}{v_s}\right)^n\right]^{1/n}}$

(2) $\frac{E}{\left[1+\left(\frac{\mu_n E}{v_s}\right)^n\right]^{n}}$

(3) $\frac{\mu_n}{\left[1+\frac{\mu_n E}{v_s}\right]^{1/n}}$

(4) $\frac{\mu_n E}{\left[1-\left(\frac{\mu_n E}{v_s}\right)^n\right]^{1/n}}$

Options :

878270142049. 1

878270142050. 2

878270142051. 3

878270142052. 4

Question Number : 54 Question Id : 87827036131 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In a MOS structure the ϕ_m is the work function of metal and ϕ_s is the work function of semiconductor than the flat band voltage is :

(1) $\phi_m + \phi_s$
(2) $2\phi_m + \phi_s$
(3) $\phi_m - \phi_s$
(4) $2\phi_m - \phi_s$

Options :

878270142053. 1

878270142054. 2

878270142055. 3

878270142056. 4

Question Number : 54 Question Id : 87827036131 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In a MOS structure the ϕ_m is the work function of metal and ϕ_s is the work function of semiconductor than the flat band voltage is :

(1) $\phi_m + \phi_s$
(2) $2\phi_m + \phi_s$
(3) $\phi_m - \phi_s$
(4) $2\phi_m - \phi_s$

Options :

878270142053. 1

878270142054. 2

878270142055. 3

878270142056. 4

Question Number : 55 Question Id : 87827036132 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

When exposed to light, the positive resists in developer solution responds by becoming :

(1) insoluble
(2) highly insoluble
(3) partially soluble
(4) more soluble

Options :

878270142057. 1

878270142058. 2

878270142059. 3

878270142060. 4

Question Number : 55 Question Id : 87827036132 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

When exposed to light, the positive resists in developer solution responds by becoming :

(1) insoluble
(2) highly insoluble
(3) partially soluble
(4) more soluble

Options :

878270142057. 1

878270142058. 2

878270142059. 3

878270142060. 4

Question Number : 56 Question Id : 87827036133 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Czochralaski (Cz) method is used instead of using float zone technique to grow Si crystal because it produces :

(1) defect free crystal
(2) large diameter crystal
(3) uniform crystal
(4) small diameter crystal

Options :

878270142061. 1

878270142062. 2

878270142063. 3

878270142064. 4

Question Number : 56 Question Id : 87827036133 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Czochralaski (Cz) method is used instead of using float zone technique to grow Si crystal because it produces :

(1) defect free crystal
(2) large diameter crystal
(3) uniform crystal
(4) small diameter crystal

Options :

878270142061. 1

878270142062. 2

878270142063. 3

878270142064. 4

Question Number : 57 Question Id : 87827036134 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

When silicon dioxide of thickness d is grown, the Silicon consumed is :

(1) 0.33 d

(2) 0.44 d

(3) 0.55 d

(4) 0.66 d

Options :

878270142065. 1

878270142066. 2

878270142067. 3

878270142068. 4

Question Number : 57 Question Id : 87827036134 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

When silicon dioxide of thickness d is grown, the Silicon consumed is :

(1) 0.33 d

(2) 0.44 d

(3) 0.55 d

(4) 0.66 d

Options :

878270142065. 1

878270142066. 2

878270142067. 3

878270142068. 4

Question Number : 58 Question Id : 87827036135 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The evaporation rate from a clean surface is related to the equilibrium vapour pressure Pe of the evaporating species of molecular weight M by an expression :

(1) $R = 4.43 \times 10^{-4} \left(\frac{M}{T}\right) Pe$

(2) $R = 4.43 \times 10^{-6} \left(\frac{M}{T}\right)^{1/2} Pe$

(3) $R = 4.43 \times 10^{-4} \left(\frac{M}{T}\right)^{1/2} Pe$

(4) $R = 4.43 \times 10^{-6} \left(\frac{M}{T}\right) Pe$

Options :

878270142069. 1

878270142070. 2

878270142071. 3

878270142072. 4

Question Number : 58 Question Id : 87827036135 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The evaporation rate from a clean surface is related to the equilibrium vapour pressure Pe of the evaporating species of molecular weight M by an expression :

(1) $R = 4.43 \times 10^{-4} \left(\frac{M}{T}\right) Pe$

(2) $R = 4.43 \times 10^{-6} \left(\frac{M}{T}\right)^{1/2} Pe$

(3) $R = 4.43 \times 10^{-4} \left(\frac{M}{T}\right)^{1/2} Pe$

(4) $R = 4.43 \times 10^{-6} \left(\frac{M}{T}\right) Pe$

Options :

878270142069. 1

878270142070. 2

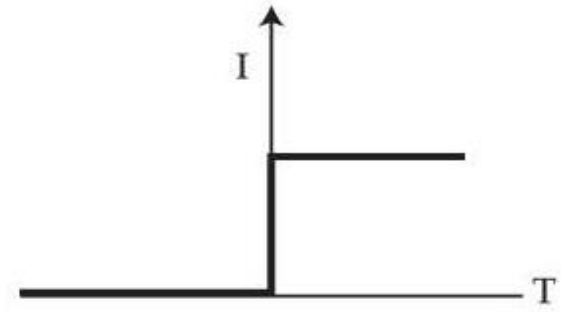
878270142071. 3

878270142072. 4

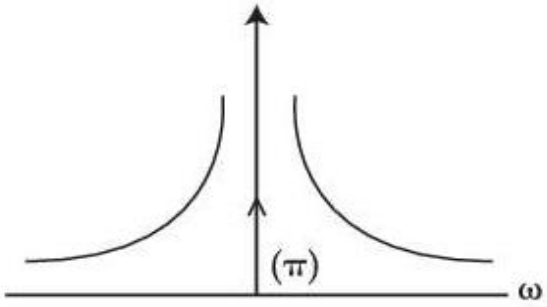
Question Number : 59 Question Id : 87827036136 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

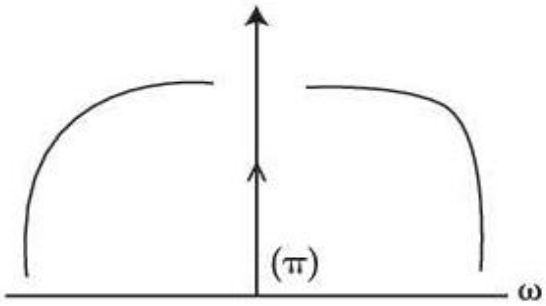
The Fourier transform of the following time domain function is :



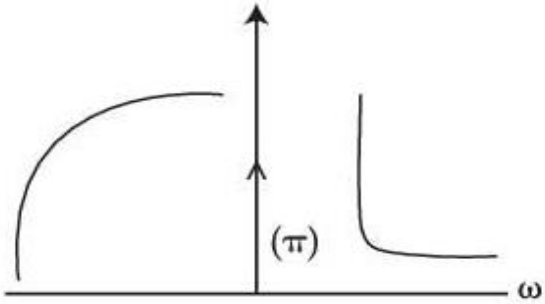
(1)



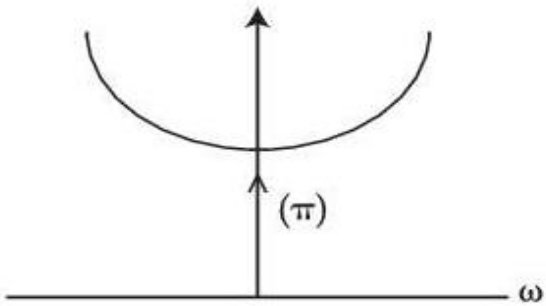
(2)



(3)



(4)



Options :

878270142073. 1

878270142074. 2

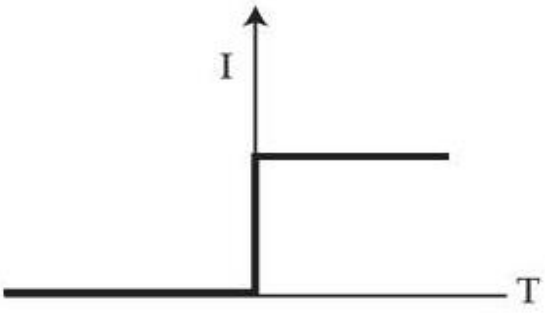
878270142075. 3

878270142076. 4

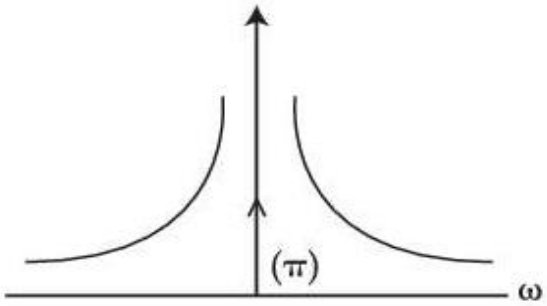
Question Number : 59 Question Id : 87827036136 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

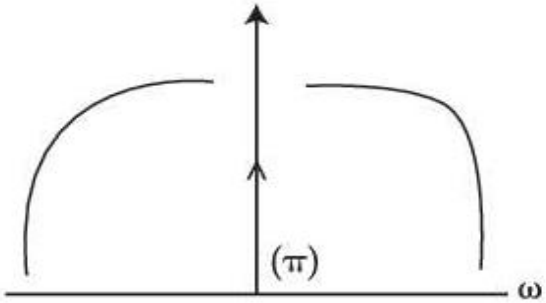
The Fourier transform of the following time domain function is :



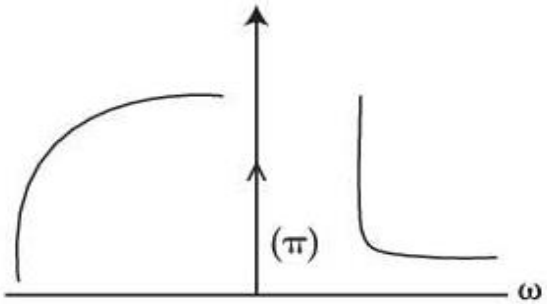
(1)



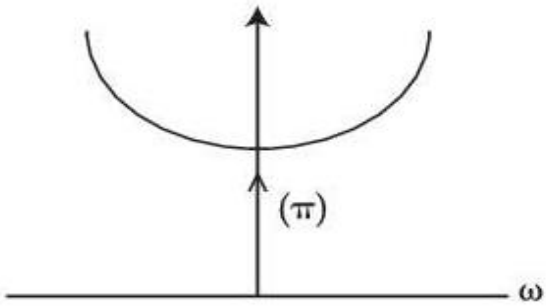
(2)



(3)



(4)



Options :

878270142073. 1

878270142074. 2

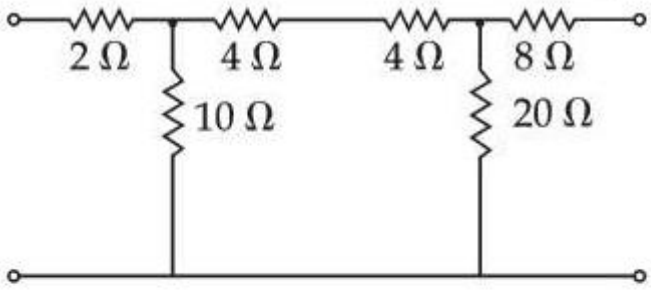
878270142075. 3

878270142076. 4

Question Number : 60 Question Id : 87827036137 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The T-parameters for the following cascaded network is :



(1) $t = \begin{bmatrix} 1.78 & 25.84\,\Omega \\ 0.195 & 3.32 \end{bmatrix}$

(2) $t = \begin{bmatrix} 1.25 & 45.23\,\Omega \\ 1.65 & 4.58 \end{bmatrix}$

(3) $t = \begin{bmatrix} 1.65 & 20.23\,\Omega \\ 1.95 & 6.58 \end{bmatrix}$

(4) $t = \begin{bmatrix} 7.2 & 16.3\,\Omega \\ 2.35 & 4.3 \end{bmatrix}$

Options :

878270142077. 1

878270142078. 2

878270142079. 3

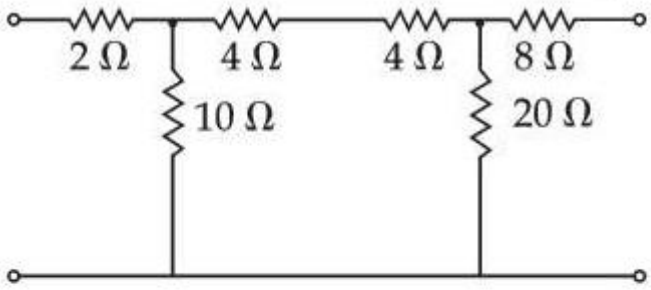
878270142080. 4

Question Number : 60 Question Id : 87827036137 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The T-parameters for the following cascaded network is :



(1) $t = \begin{bmatrix} 1.78 & 25.84\,\Omega \\ 0.195 & 3.32 \end{bmatrix}$

(2) $t = \begin{bmatrix} 1.25 & 45.23\,\Omega \\ 1.65 & 4.58 \end{bmatrix}$

(3) $t = \begin{bmatrix} 1.65 & 20.23\,\Omega \\ 1.95 & 6.58 \end{bmatrix}$

(4) $t = \begin{bmatrix} 7.2 & 16.3\,\Omega \\ 2.35 & 4.3 \end{bmatrix}$

Options :

878270142077. 1

878270142078. 2

878270142079. 3

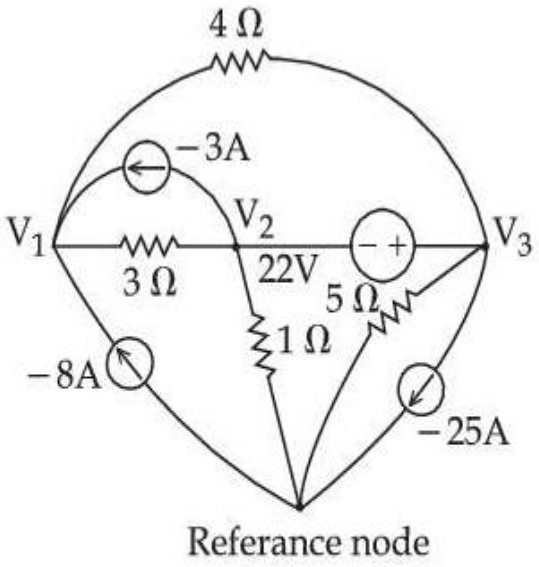
878270142080. 4

Question Number : 61 Question Id : 87827036138 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The value of the unknown node voltage V_1 in the following circuit is :



(1) $V_1 = 2.3$ V
(2) $V_1 = 1.071$ V
(3) $V_1 = 0.98$ V
(4) $V_1 = 6.34$ V

Options :

878270142081. 1

878270142082. 2

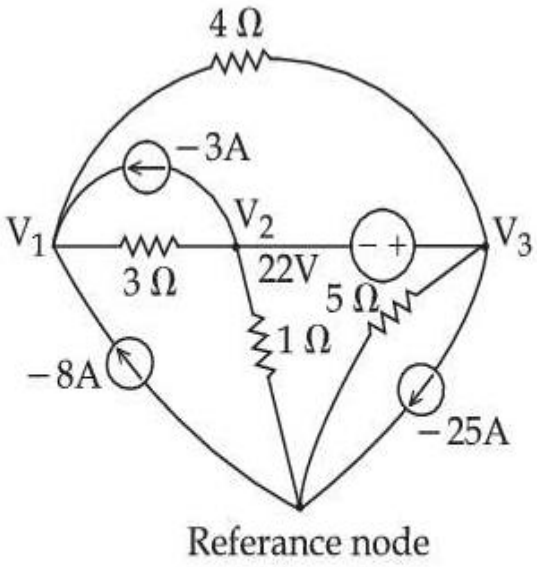
878270142083. 3

878270142084. 4

Question Number : 61 Question Id : 87827036138 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The value of the unknown node voltage V_1 in the following circuit is :



(1) $V_1 = 2.3$ V
(2) $V_1 = 1.071$ V
(3) $V_1 = 0.98$ V
(4) $V_1 = 6.34$ V

Options :

878270142081. 1

878270142082. 2

878270142083. 3

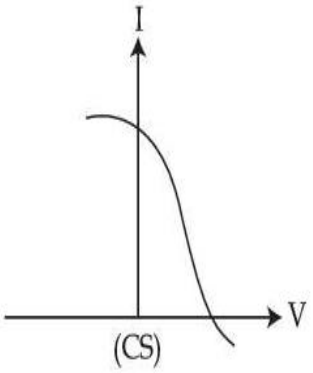
878270142084. 4

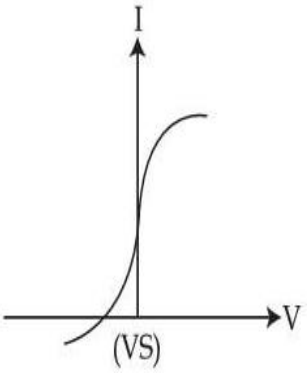
Question Number : 62 Question Id : 87827036139 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

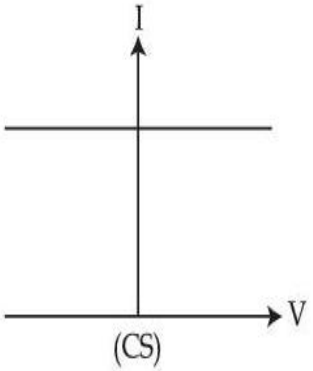
Which of the following represents an ideal current source(es) and ideal voltage source(es) behaviour ?

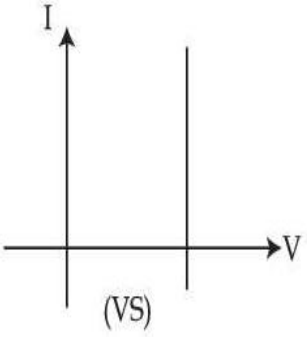
(1)



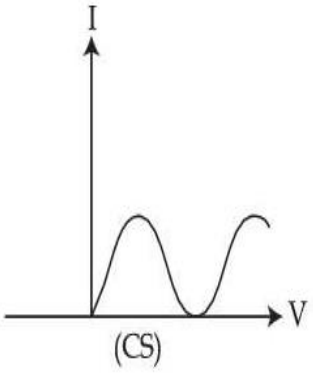


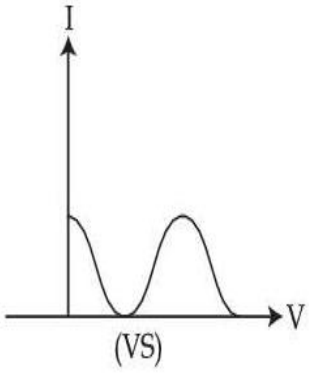
(2)



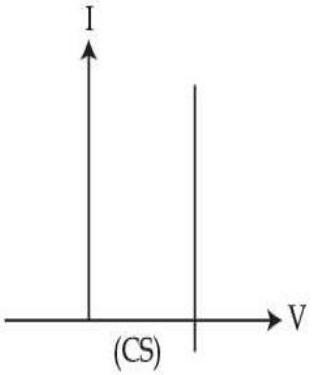


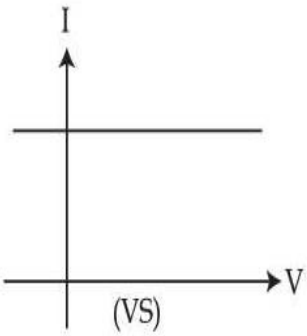
(3)





(4)





Options :

878270142085. 1

878270142086. 2

878270142087. 3

878270142088. 4

Question Number : 62 Question Id : 87827036139 Question Type : MCQ Option Shuffling : No

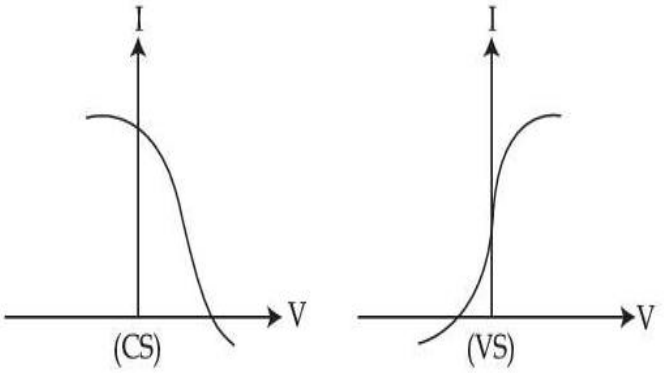
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

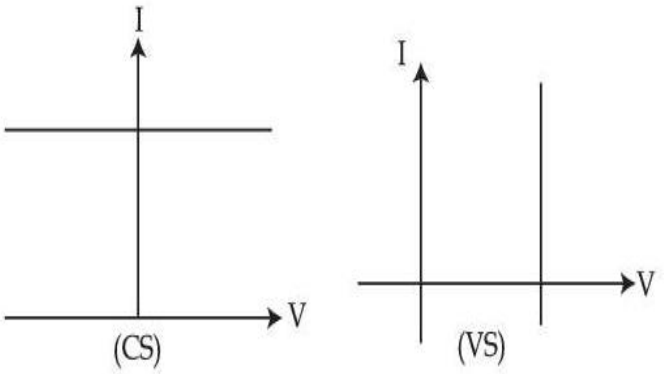
Correct Marks : 2 Wrong Marks : 0

Which of the following represents an ideal current source(es) and ideal voltage source(es) behaviour ?

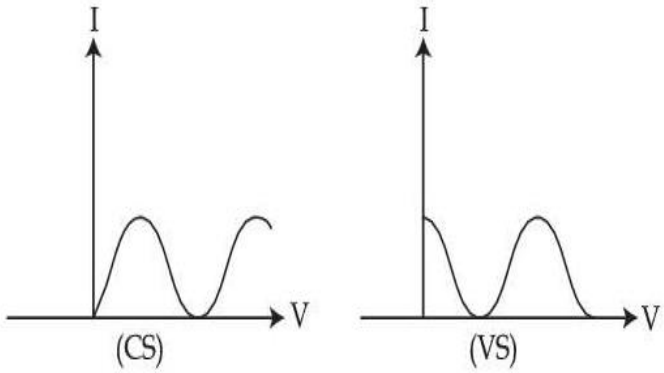
(1)



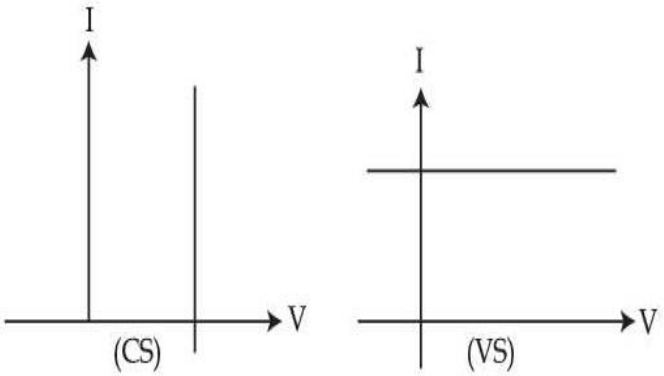
(2)



(3)



(4)



Options :

878270142085. 1

878270142086. 2

878270142087. 3

878270142088. 4

Question Number : 63 Question Id : 87827036140 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The output voltage (V_0) of the converter (IC 9400) is related to the input frequency (F_{in}) by the equation :

(1) $V_0 = V_{ref}\, C_{ref}\, R_{int}\, F_{in}$

(2) $V_0 = \dfrac{F_{in}}{V_{ref} \cdot C_{ref} \cdot R_{int}}$

(3) $V_0 = \dfrac{V_{ref} \cdot F_{in}}{R_{int} \cdot C_{ref}}$

(4) $V_0 = \dfrac{C_{ref} \cdot R_{int} \cdot F_{in}}{V_{ref}}$

Options :

878270142089. 1

878270142090. 2

878270142091. 3

878270142092. 4

Question Number : 63 Question Id : 87827036140 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The output voltage (V_o) of the converter (IC 9400) is related to the input frequency (F_{in}) by the equation :

(1) $V_o = V_{ref}\, C_{ref}\, R_{int}\, F_{in}$

(2) $V_o = \frac{F_{in}}{V_{ref} \cdot C_{ref} \cdot R_{int}}$

(3) $V_o = \frac{V_{ref} \cdot F_{in}}{R_{int} \cdot C_{ref}}$

(4) $V_o = \frac{C_{ref} \cdot R_{int} \cdot F_{in}}{V_{ref}}$

Options :

878270142089. 1

878270142090. 2

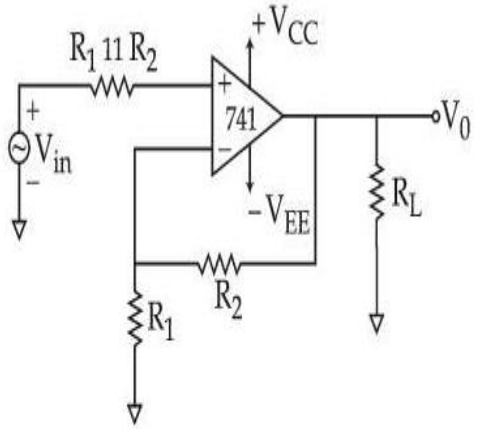
878270142091. 3

878270142092. 4

Question Number : 64 Question Id : 87827036141 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a inverting comparator circuit acting as a Schmitt Trigger, as shown in figure below, the expression of Hysteresis Voltage (V_{ny}) is given by :



(1) $V_{ny} = R_1[+V_{sat} - (-V_{sat})]$

(2) $V_{ny} = \frac{R_1}{R_2}[+V_{sat} - (-V_{sat})]$

(3) $V_{ny} = \frac{R_1}{R_1 - R_2}[+V_{sat} - (-V_{sat})]$

(4) $V_{ny} = \frac{R_1}{R_1 + R_2}[+V_{sat} - (-V_{sat})]$

Options :

878270142093. 1

878270142094. 2

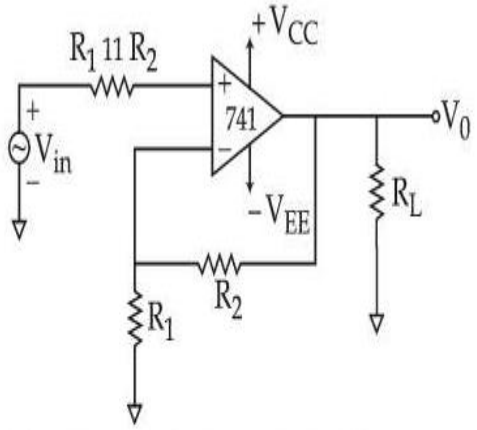
878270142095. 3

878270142096. 4

Question Number : 64 Question Id : 87827036141 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a inverting comparator circuit acting as a Schmitt Trigger, as shown in figure below, the expression of Hysteresis Voltage (V_{ny}) is given by :



(1) $V_{ny} = R_1[+V_{sat} - (-V_{sat})]$

(2) $V_{ny} = \frac{R_1}{R_2}[+V_{sat} - (-V_{sat})]$

(3) $V_{ny} = \frac{R_1}{R_1 - R_2}[+V_{sat} - (-V_{sat})]$

(4) $V_{ny} = \frac{R_1}{R_1 + R_2}[+V_{sat} - (-V_{sat})]$

Options :

878270142093. 1

878270142094. 2

878270142095. 3

878270142096. 4

Question Number : 65 Question Id : 87827036142 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a FET based phase shift oscillator, what should be the value of capacitor (C) for oscillator operation at 1 kHz. The resistor (R) in the feedback network is 20 kΩ.

(1) 6.25×10^{-9} F

(2) 6.5×10^{-9} F

(3) 3.25×10^{-3} F

(4) 3.25×10^{-9} F

Options :

878270142097. 1

878270142098. 2

878270142099. 3

878270142100. 4

Question Number : 65 Question Id : 87827036142 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a FET based phase shift oscillator, what should be the value of capacitor (C) for oscillator operation at 1 kHz. The resistor (R) in the feedback network is 20 kΩ.

(1) 6.25×10^{-9} F

(2) 6.5×10^{-9} F

(3) 3.25×10^{-3} F

(4) 3.25×10^{-9} F

Options :

878270142097. 1

878270142098. 2

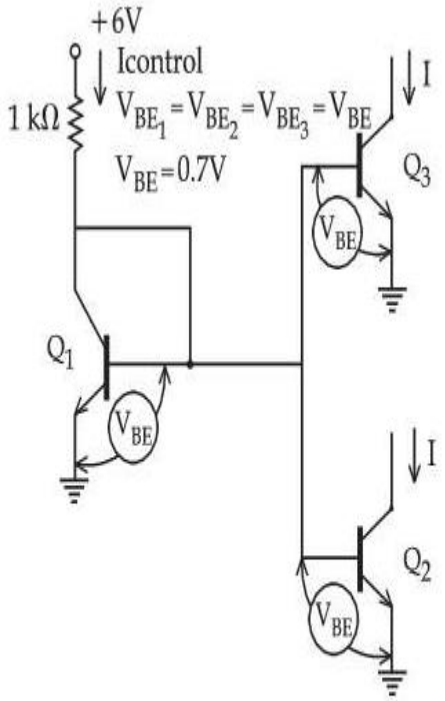
878270142099. 3

878270142100. 4

Question Number : 66 Question Id : 87827036143 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Calculate the current I through each of the transistor Q_2 and Q_3 in the circuit given below :



(1) 6 mA
(2) 5.3 mA
(3) 3.2 mA
(4) 4 mA

Options :

878270142101. 1

878270142102. 2

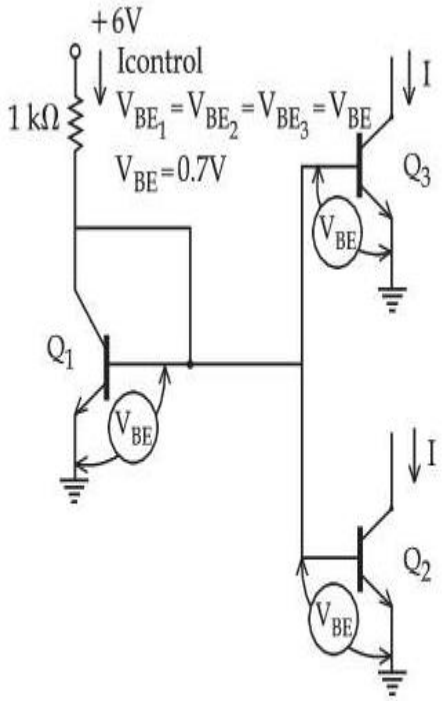
878270142103. 3

878270142104. 4

Question Number : 66 Question Id : 87827036143 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Calculate the current I through each of the transistor Q_2 and Q_3 in the circuit given below :



(1) 6 mA
(2) 5.3 mA
(3) 3.2 mA
(4) 4 mA

Options :

878270142101. 1

878270142102. 2

878270142103. 3

878270142104. 4

Question Number : 67 Question Id : 87827036144 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If $(1235)_x = (3033)_y$, where x and y indicate the bases of the corresponding numbers, then :

(1) $x = 5$ and $y = 3$
(2) $x = 7$ and $y = 5$
(3) $x = 8$ and $y = 6$
(4) $x = 9$ and $y = 7$

Options :

878270142105. 1

878270142106. 2

878270142107. 3

878270142108. 4

Question Number : 67 Question Id : 87827036144 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If $(1235)_x = (3033)_y$, where x and y indicate the bases of the corresponding numbers, then :

(1) $x=5$ and $y=3$

(2) $x=7$ and $y=5$

(3) $x=8$ and $y=6$

(4) $x=9$ and $y=7$

Options :

878270142105. 1

878270142106. 2

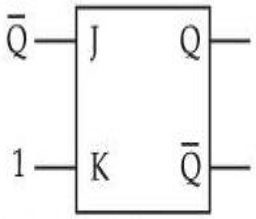
878270142107. 3

878270142108. 4

Question Number : 68 Question Id : 87827036145 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In a J-K FF, if $J=\overline{Q}$ and $K=1$ (see figure). Assuming the flip flop was initially cleared and then clocked for 6 pulses, the sequence at the Q output will be :



(1) 010000
(2) 011001
(3) 010010
(4) 010101

Options :

878270142109. 1

878270142110. 2

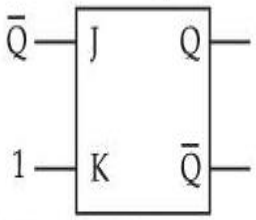
878270142111. 3

878270142112. 4

Question Number : 68 Question Id : 87827036145 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In a J-K FF, if $J=\overline{Q}$ and $K=1$ (see figure). Assuming the flip flop was initially cleared and then clocked for 6 pulses, the sequence at the Q output will be :



(1) 010000
(2) 011001
(3) 010010
(4) 010101

Options :

878270142109. 1

878270142110. 2

878270142111. 3

878270142112. 4

Question Number : 69 Question Id : 87827036146 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The Boolean function $Y = AB + CD$ is to be realized using only 2-input NAND gates. The minimum number of gates required are :

(1) 2
(2) 3
(3) 4
(4) 5

Options :

878270142113. 1

878270142114. 2

878270142115. 3

878270142116. 4

Question Number : 69 Question Id : 87827036146 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The Boolean function $Y = AB + CD$ is to be realized using only 2-input NAND gates. The minimum number of gates required are :

(1) 2
(2) 3
(3) 4
(4) 5

Options :

878270142113. 1

878270142114. 2

878270142115. 3

878270142116. 4

Question Number : 70 Question Id : 87827036147 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The simplification in minimal sum of product (sop) of using K-map is :

$Y = F(A, B, C, D)$

$$= \sum_{m}(0, 2, 3, 6, 7) + \sum_{d}(8, 10, 11, 15)$$

(1) $Y = AC + BD'$

(2) $Y = AC' + BD'$

(3) $Y = A'C' + B'D$

(4) $Y = A'C + B'D'$

Options :

878270142117. 1

878270142118. 2

878270142119. 3

878270142120. 4

Question Number : 70 Question Id : 87827036147 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The simplification in minimal sum of product (sop) of using K-map is :

$Y = F(A, B, C, D)$

$$= \sum_{m}(0, 2, 3, 6, 7) + \sum_{d}(8, 10, 11, 15)$$

(1) $Y = AC + BD'$

(2) $Y = AC' + BD'$

(3) $Y = A'C' + B'D$

(4) $Y = A'C + B'D'$

Options :

878270142117. 1

878270142118. 2

878270142119. 3

878270142120. 4

Question Number : 71 Question Id : 87827036148 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

How many conditional flags are there in the program status word register (psw) in the microcontroller 8051 ?

(1) Two
(2) Four
(3) Five
(4) Six

Options :

878270142121. 1

878270142122. 2

878270142123. 3

878270142124. 4

Question Number : 71 Question Id : 87827036148 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

How many conditional flags are there in the program status word register (psw) in the microcontroller 8051 ?

(1) Two
(2) Four
(3) Five
(4) Six

Options :

878270142121. 1

878270142122. 2

878270142123. 3

878270142124. 4

Question Number : 72 Question Id : 87827036149 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The address assigned to the 128 bytes RAM space is from 00H to 7FH. What is the correct address for the bit-addressable area in this space ?

(1) 00-07H
(2) 10-17H
(3) 18-1FH
(4) 20-2FH

Options :

878270142125. 1

878270142126. 2

878270142127. 3

878270142128. 4

Question Number : 72 Question Id : 87827036149 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The address assigned to the 128 bytes RAM space is from 00H to 7FH. What is the correct address for the bit-addressable area in this space ?

(1) 00-07H
(2) 10-17H
(3) 18-1FH
(4) 20-2FH

Options :

878270142125. 1

878270142126. 2

878270142127. 3

878270142128. 4

Question Number : 73 Question Id : 87827036150 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following flags remaining undefined after the execution of instruction AAD (ASCII adjust after division) in the 8086 microprocessor ?

(1) Carry flag
(2) Sign flag
(3) Zero flag
(4) Parity flag

Options :

878270142129. 1

878270142130. 2

878270142131. 3

878270142132. 4

Question Number : 73 Question Id : 87827036150 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following flags remaining undefined after the execution of instruction AAD (ASCII adjust after division) in the 8086 microprocessor ?

(1) Carry flag
(2) Sign flag
(3) Zero flag
(4) Parity flag

Options :

878270142129. 1

878270142130. 2

878270142131. 3

878270142132. 4

Question Number : 74 Question Id : 87827036151 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

What would be the value of register AL after the execution of the following assembly language program of 8086 ?

AL = 53, CL = 29

ADDAL, CL

DAA

(1) 7C

(2) 82

(3) DC

(4) E8

Options :

878270142133. 1

878270142134. 2

878270142135. 3

878270142136. 4

Question Number : 74 Question Id : 87827036151 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

What would be the value of register AL after the execution of the following assembly language program of 8086 ?

AL = 53, CL = 29

ADDAL, CL

DAA

(1) 7C

(2) 82

(3) DC

(4) E8

Options :

878270142133. 1

878270142134. 2

878270142135. 3

878270142136. 4

Question Number : 75 Question Id : 87827036152 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a reflex Klystron :

(1) The loop gain has a magnitude < 1

(2) The loop gain is 1 and phase shift is multiple of π

(3) The loop gain is > 1 and phase shift is multiple of π

(4) The loop gain is 1 and phase shift is multiple of 2π

Options :

878270142137. 1

878270142138. 2

878270142139. 3

878270142140. 4

Question Number : 75 Question Id : 87827036152 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a reflex Klystron :

(1) The loop gain has a magnitude < 1

(2) The loop gain is 1 and phase shift is multiple of π

(3) The loop gain is > 1 and phase shift is multiple of π

(4) The loop gain is 1 and phase shift is multiple of 2π

Options :

878270142137. 1

878270142138. 2

878270142139. 3

878270142140. 4

Question Number : 76 Question Id : 87827036153 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For an X band radar operating at 12 GHz, the value of minimum pulse replication frequency, which may be used to unambiguous measure the wind velocity in a tornado with a wind speed of 360 km/hour is :

(1) 16 kHz

(2) 32 kHz

(3) 48 kHz

(4) 8 kHz

Options :

878270142141. 1

878270142142. 2

878270142143. 3

878270142144. 4

Question Number : 76 Question Id : 87827036153 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For an X band radar operating at 12 GHz, the value of minimum pulse replication frequency, which may be used to unambiguous measure the wind velocity in a tornado with a wind speed of 360 km/hour is :

(1) 16 kHz

(2) 32 kHz

(3) 48 kHz

(4) 8 kHz

Options :

878270142141. 1

878270142142. 2

878270142143. 3

878270142144. 4

Question Number : 77 Question Id : 87827036154 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In cylindrical coordinates, the Laplace equation holds the following expression :

(1) $\nabla^2 V = \frac{1}{\rho}\frac{\partial}{\partial \rho}\left(\frac{\partial V}{\partial \rho}\right) + \frac{1}{\rho^2}\frac{\partial^2 V}{\partial \phi^2} = 0$

(2) $\nabla^2 V = \frac{1}{\rho}\frac{\partial}{\partial \rho}\left(\rho\frac{\partial V}{\partial \rho}\right) + \frac{\partial^2 V}{\partial Z^2} = 0$

(3) $\nabla^2 V = \frac{1}{\rho}\frac{\partial}{\partial \rho}\left(\rho\frac{\partial V}{\partial \rho}\right) + \frac{1}{\rho^2}\frac{\partial^2 V}{\partial \phi^2} + \frac{\partial^2 V}{\partial Z^2} = 0$

(4) $\nabla^2 V = \frac{\partial^2 V}{\partial Z^2} = 0$

Options :

878270142145. 1

878270142146. 2

878270142147. 3

878270142148. 4

Question Number : 77 Question Id : 87827036154 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In cylindrical coordinates, the Laplace equation holds the following expression :

(1) $\nabla^2 V = \frac{1}{\rho}\frac{\partial}{\partial \rho}\left(\frac{\partial V}{\partial \rho}\right) + \frac{1}{\rho^2}\frac{\partial^2 V}{\partial \phi^2} = 0$

(2) $\nabla^2 V = \frac{1}{\rho}\frac{\partial}{\partial \rho}\left(\rho\frac{\partial V}{\partial \rho}\right) + \frac{\partial^2 V}{\partial Z^2} = 0$

(3) $\nabla^2 V = \frac{1}{\rho}\frac{\partial}{\partial \rho}\left(\rho\frac{\partial V}{\partial \rho}\right) + \frac{1}{\rho^2}\frac{\partial^2 V}{\partial \phi^2} + \frac{\partial^2 V}{\partial Z^2} = 0$

(4) $\nabla^2 V = \frac{\partial^2 V}{\partial Z^2} = 0$

Options :

878270142145. 1

878270142146. 2

878270142147. 3

878270142148. 4

Question Number : 78 Question Id : 87827036155 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a uniform line charge of 8nc/m lying along the z axis, the electric field at a radius of 3 m from the uniform line is given by :

(1) 49.7 a_ρ V/m
(2) 94.7 a_ρ V/m
(3) 47.9 a_ρ V/m
(4) 27.9 a_ρ V/m

Options :

878270142149. 1

878270142150. 2

878270142151. 3

878270142152. 4

Question Number : 78 Question Id : 87827036155 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a uniform line charge of 8nc/m lying along the z axis, the electric field at a radius of 3 m from the uniform line is given by :

(1) 49.7 a_ρ V/m
(2) 94.7 a_ρ V/m
(3) 47.9 a_ρ V/m
(4) 27.9 a_ρ V/m

Options :

878270142149. 1

878270142150. 2

878270142151. 3

878270142152. 4

Question Number : 79 Question Id : 87827036156 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The minimum receivable signal in a radar receiver which has an IF bandwidth of 2.5 MH and a 9-dB noise figure is : (Take T as 290° K)

(1) 9.8×10^{-14} w

(2) 6.946×10^{-14} w

(3) 3.29×10^{-12} w

(4) 1.986×10^{-13} w

Options :

878270142153. 1

878270142154. 2

878270142155. 3

878270142156. 4

Question Number : 79 Question Id : 87827036156 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The minimum receivable signal in a radar receiver which has an IF bandwidth of 2.5 MH and a 9-dB noise figure is : (Take T as 290° K)

(1) 9.8×10^{-14} w

(2) 6.946×10^{-14} w

(3) 3.29×10^{-12} w

(4) 1.986×10^{-13} w

Options :

878270142153. 1

878270142154. 2

878270142155. 3

878270142156. 4

Question Number : 80 Question Id : 87827036157 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The peak carrier voltage is 150 V. If the resistor is 200 Ω and the modulation index is 0.5, the total power in the AM signal is :

(1) 263.5 w
(2) 45.23 w
(3) 63.28 w
(4) 105.98 w

Options :

878270142157. 1

878270142158. 2

878270142159. 3

878270142160. 4

Question Number : 80 Question Id : 87827036157 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The peak carrier voltage is 150 V. If the resistor is 200 Ω and the modulation index is 0.5, the total power in the AM signal is :

(1) 263.5 w
(2) 45.23 w
(3) 63.28 w
(4) 105.98 w

Options :

878270142157. 1

878270142158. 2

878270142159. 3

878270142160. 4

Question Number : 81 Question Id : 87827036158 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following is true ?

(1) FM has finite number of side bands as well as the carrier

(2) In FM, the total transmitted power always remains constant, but bandwidth increases with increased depth of modulation

(3) In AM, the amplitude of carries component remains constant

(4) For eigen values the carrier component of FM waves appear completely

Options :

878270142161. 1

878270142162. 2

878270142163. 3

878270142164. 4

Question Number : 81 Question Id : 87827036158 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following is true ?

(1) FM has finite number of side bands as well as the carrier

(2) In FM, the total transmitted power always remains constant, but bandwidth increases with increased depth of modulation

(3) In AM, the amplitude of carries component remains constant

(4) For eigen values the carrier component of FM waves appear completely

Options :

878270142161. 1

878270142162. 2

878270142163. 3

878270142164. 4

Question Number : 82 Question Id : 87827036159 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The modulation index of an AM wave is given by :

(1) $m = \frac{V_{max} - V_{min}}{(V_{max})^2}$

(2) $m = \frac{(V_{min})^2}{V_{max} - V_{min}}$

(3) $m = \frac{V_{max} - V_{min}}{V_{max} + V_{min}}$

(4) $m = \frac{V_{max} + V_{min}}{V_{max} - V_{min}}$

Options :

878270142165. 1

878270142166. 2

878270142167. 3

878270142168. 4

Question Number : 82 Question Id : 87827036159 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The modulation index of an AM wave is given by :

(1) $m = \frac{V_{max} - V_{min}}{(V_{max})^2}$

(2) $m = \frac{(V_{min})^2}{V_{max} - V_{min}}$

(3) $m = \frac{V_{max} - V_{min}}{V_{max} + V_{min}}$

(4) $m = \frac{V_{max} + V_{min}}{V_{max} - V_{min}}$

Options :

878270142165. 1

878270142166. 2

878270142167. 3

878270142168. 4

Question Number : 83 Question Id : 87827036160 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a two transistor model, the value of $\alpha_1 + \alpha_2$ is equal to :

(1) > 1

(2) < 1

(3) $= 1$

(4) $= -1$

Options :

878270142169. 1

878270142170. 2

878270142171. 3

878270142172. 4

Question Number : 83 Question Id : 87827036160 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a two transistor model, the value of $\alpha_1 + \alpha_2$ is equal to :

(1) > 1

(2) < 1

(3) $= 1$

(4) $= -1$

Options :

878270142169. 1

878270142170. 2

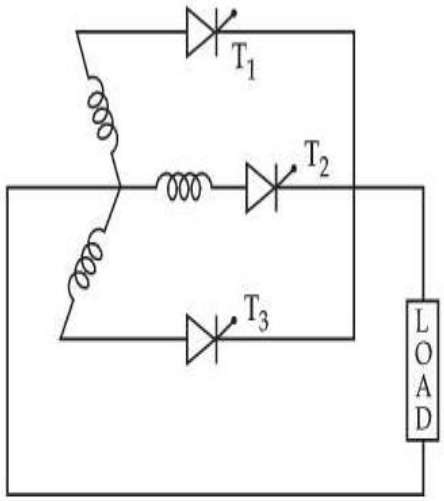
878270142171. 3

878270142172. 4

Question Number : 84 Question Id : 87827036161 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For the circuit given, phase voltage is $V_m \sin \omega_m t$, where V_m - peak phase voltage.



The value of maximum average output voltage that occurs at a delay angle $\alpha = 0$ is given by L

(1) $\frac{\sqrt{3}\, V_m}{\pi} \cos \alpha$

(2) $\frac{3\sqrt{3}\, V_m}{\pi} \cos \alpha$

(3) $\frac{3\sqrt{3}\, V_m \cos \alpha}{2\pi}$

(4) $\frac{3\sqrt{3}\, V_m \cos \alpha}{4\pi}$

Options :

878270142173. 1

878270142174. 2

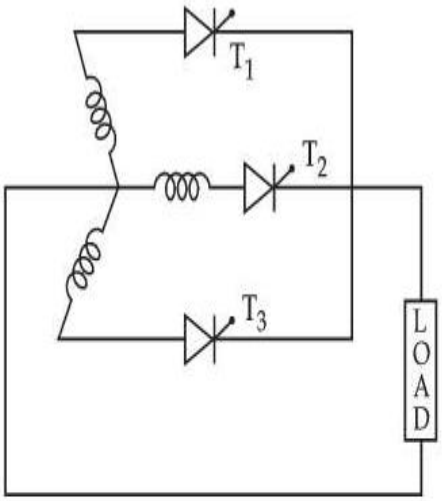
878270142175. 3

878270142176. 4

Question Number : 84 Question Id : 87827036161 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For the circuit given, phase voltage is $V_m \sin \omega_m t$, where V_m - peak phase voltage.



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(1) $\frac{\sqrt{3}\, V_m}{\pi} \cos \alpha$

(2) $\frac{3\sqrt{3}\, V_m}{\pi} \cos \alpha$

(3) $\frac{3\sqrt{3}\, V_m \cos \alpha}{2\pi}$

(4) $\frac{3\sqrt{3}\, V_m \cos \alpha}{4\pi}$

Options :

878270142173. 1

878270142174. 2

878270142175. 3

878270142176. 4

Question Number : 85 Question Id : 87827036162 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If any root of the characteristic equation of a system has a positive, impulse response g(t) is unbounded and $\int_0^\infty |g(\tau)|\,d\tau$ is infinite, then the system is :

(1) Absolute stable
(2) Marginally stable
(3) Critically stable
(4) Unstable

Options :

878270142177. 1

878270142178. 2

878270142179. 3

878270142180. 4

Question Number : 85 Question Id : 87827036162 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If any root of the characteristic equation of a system has a positive, impulse response g(t) is unbounded and $\int_0^\infty |g(\tau)|\,d\tau$ is infinite, then the system is :

(1) Absolute stable
(2) Marginally stable
(3) Critically stable
(4) Unstable

Options :

878270142177. 1

878270142178. 2

878270142179. 3

878270142180. 4

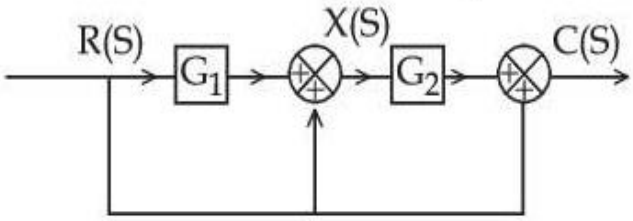
Question Number : 86 Question Id : 87827036163 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The transfer function of the system shown in the following figure is :



(1) G_1G_2+1
(2) G_1+G_2+1
(3) $G_1G_2+G_1+1$
(4) $G_1G_2+G_2+1$

Options :

878270142181. 1

878270142182. 2

878270142183. 3

878270142184. 4

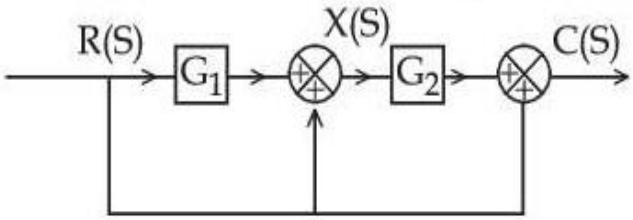
Question Number : 86 Question Id : 87827036163 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The transfer function of the system shown in the following figure is :



(1) G_1G_2+1
(2) G_1+G_2+1
(3) $G_1G_2+G_1+1$
(4) $G_1G_2+G_2+1$

Options :

878270142181. 1

878270142182. 2

878270142183. 3

878270142184. 4

Question Number : 87 Question Id : 87827036164 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The mechanical elements that are used to convert the applied force in to a displacement are called :

(1) Force summing devices
(2) Force multiplying devices
(3) Force integrating devices
(4) Force removing devices

Options :

878270142185. 1

878270142186. 2

878270142187. 3

878270142188. 4

Question Number : 87 Question Id : 87827036164 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The mechanical elements that are used to convert the applied force in to a displacement are called :

(1) Force summing devices
(2) Force multiplying devices
(3) Force integrating devices
(4) Force removing devices

Options :

878270142185. 1

878270142186. 2

878270142187. 3

878270142188. 4

Question Number : 88 Question Id : 87827036165 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A current of 300 μA produces FSD in an instrument whose coil resistance is 75 Ω. What will be the value of shunt resistors if the instrument is to measure current of 5A ?

(1) 0.0030 Ω
(2) 0.0023 Ω
(3) 0.0045 Ω
(4) 0.0067 Ω

Options :

878270142189. 1

878270142190. 2

878270142191. 3

878270142192. 4

Question Number : 88 Question Id : 87827036165 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A current of 300 μA produces FSD in an instrument whose coil resistance is 75 Ω. What will be the value of shunt resistors if the instrument is to measure current of 5A ?

(1) 0.0030 Ω
(2) 0.0023 Ω
(3) 0.0045 Ω
(4) 0.0067 Ω

Options :

878270142189. 1

878270142190. 2

878270142191. 3

878270142192. 4

Question Number : 89 Question Id : 87827036166 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A device used to convert a non-electrical quantity into an electrical signal is called :

(1) Transformer
(2) Oscillator
(3) Transducer
(4) Inverter

Options :

878270142193. 1

878270142194. 2

878270142195. 3

878270142196. 4

Question Number : 89 Question Id : 87827036166 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A device used to convert a non-electrical quantity into an electrical signal is called :

(1) Transformer
(2) Oscillator
(3) Transducer
(4) Inverter

Options :

878270142193. 1

878270142194. 2

878270142195. 3

878270142196. 4

Question Number : 90 Question Id : 87827036167 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The resistor value required to use a 0-1 mA meter with an internal resistance of 125 Ω for a 0-1 V meter will be :

(1) 1000 Ω
(2) 250 Ω
(3) 875 Ω
(4) 1125 Ω

Options :

878270142197. 1

878270142198. 2

878270142199. 3

878270142200. 4

Question Number : 90 Question Id : 87827036167 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The resistor value required to use a 0-1 mA meter with an internal resistance of 125 Ω for a 0-1 V meter will be :

(1) 1000 Ω
(2) 250 Ω
(3) 875 Ω
(4) 1125 Ω

Options :

878270142197. 1

878270142198. 2

878270142199. 3

878270142200. 4

Question Number : 91 Question Id : 87827036168 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In MOSFET, the linear region current is :

(A) $\frac{\mu_n \, Cox \, w}{L}\left(V_{gs} - V_{th} - \frac{V_{ds}}{Z}\right)V_{ds}$

(B) $\frac{\mu_n \, Cox \, w}{L}\left(V_{gs} - V_{th}\right)V_{ds}$

(C) $\frac{\mu_n \, Cox \, w}{2L}\left(V_{gs} - V_{th}\right)V_{ds}^2$

(D) $\frac{\mu_n \, Cox \, w}{L}\left(V_{gs} - V_{th}\right)^2$

Choose the **most appropriate** answer from the options given below :

(1) (A) and (B) Only

(2) (B) and (C) Only

(3) (C) and (D) Only

(4) (A) and (D) Only

Options :

878270142201. 1

878270142202. 2

878270142203. 3

878270142204. 4

Question Number : 91 Question Id : 87827036168 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In MOSFET, the linear region current is :

(A) $\frac{\mu_n \, Cox \, w}{L}\left(V_{gs} - V_{th} - \frac{V_{ds}}{Z}\right)V_{ds}$

(B) $\frac{\mu_n \, Cox \, w}{L}\left(V_{gs} - V_{th}\right)V_{ds}$

(C) $\frac{\mu_n \, Cox \, w}{2L}\left(V_{gs} - V_{th}\right)V_{ds}^2$

(D) $\frac{\mu_n \, Cox \, w}{L}\left(V_{gs} - V_{th}\right)^2$

Choose the **most appropriate** answer from the options given below :

(1) (A) and (B) Only

(2) (B) and (C) Only

(3) (C) and (D) Only

(4) (A) and (D) Only

Options :

878270142201. 1

878270142202. 2

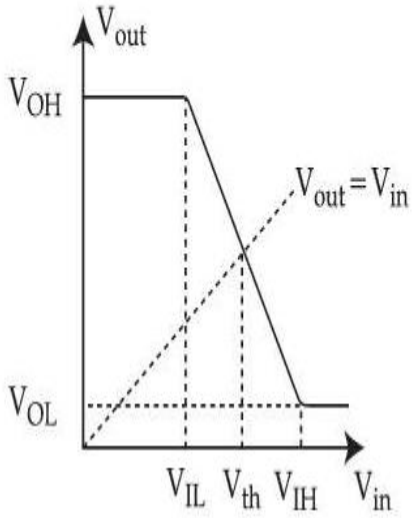
878270142203. 3

878270142204. 4

Question Number : 92 Question Id : 87827036169 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The typical voltage transfer characteristics of a realistic nmos invertor are shown in fig. The noise margin for low signal and high signal levels are :



(A) $V_{IL} + V_{IH}$

(B) $V_{IL} - V_{OL}$

(C) $V_{OH} - V_{IH}$

(D) $V_{IH} + V_{OH}$

Choose the **most appropriate** answer from the options given below :

(1) (A) and (D) Only

(2) (B) and (C) Only

(3) (A) and (C) Only

(4) (C) and (D) Only

Options :

878270142205. 1

878270142206. 2

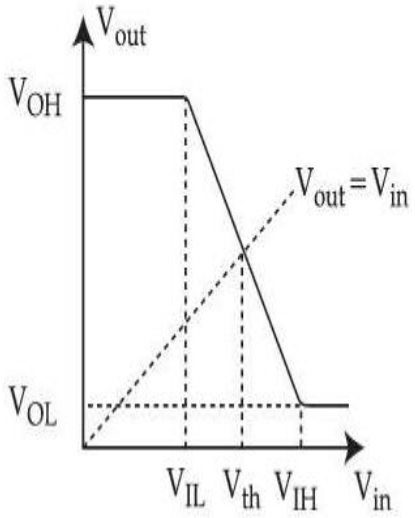
878270142207. 3

878270142208. 4

Question Number : 92 Question Id : 87827036169 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The typical voltage transfer characteristics of a realistic nmos invertor are shown in fig. The noise margin for low signal and high signal levels are :



(A) $V_{IL} + V_{IH}$

(B) $V_{IL} - V_{OL}$

(C) $V_{OH} - V_{IH}$

(D) $V_{IH} + V_{OH}$

Choose the **most appropriate** answer from the options given below :

(1) (A) and (D) Only

(2) (B) and (C) Only

(3) (A) and (C) Only

(4) (C) and (D) Only

Options :

878270142205. 1

878270142206. 2

878270142207. 3

878270142208. 4

Question Number : 93 Question Id : 87827036170 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If $Z \times L$ is the total channel area and C'_{par} is the total input parasitic capacitance, then for microwave performance the cut off frequency can be defined as :

(A) $\frac{g_m}{2\pi\left(C'_{ca}+C'_{par}\right)}$

(B) $\frac{g_m}{2\pi C_{gs}}$

(C) $\frac{g_m}{2\pi C_{gd}}$

(D) $\frac{g_m}{2\pi\left(ZLC_{ox}+C'_{par}\right)}$

Choose the **most appropriate** answer from the options given below :

(1) (A) and (B) Only

(2) (B) and (C) Only

(3) (C) and (D) Only

(4) (A) and (D) Only

Options :

878270142209. 1

878270142210. 2

878270142211. 3

878270142212. 4

Question Number : 93 Question Id : 87827036170 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If $Z \times L$ is the total channel area and C'_{par} is the total input parasitic capacitance, then for microwave performance the cut off frequency can be defined as :

(A) $\frac{g_m}{2\pi\left(C'_{ca}+C'_{par}\right)}$

(B) $\frac{g_m}{2\pi C_{gs}}$

(C) $\frac{g_m}{2\pi C_{gd}}$

(D) $\frac{g_m}{2\pi\left(ZLC_{ox}+C'_{par}\right)}$

Choose the **most appropriate** answer from the options given below :

(1) (A) and (B) Only

(2) (B) and (C) Only

(3) (C) and (D) Only

(4) (A) and (D) Only

Options :

878270142209. 1

878270142210. 2

878270142211. 3

878270142212. 4

Question Number : 94 Question Id : 87827036171 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements :

(A) The origin of the punch through phenomena is the lowering of the barrier near the source.

(B) For a long channel device, a drain bias can change the effective channel length, but the barrier at the source end remains constant.

(C) For a short channel device, this barrier is no longer fixed.

(D) The lowering of the source barrier do not cause any injection of extra carriers.

(E) The punch through condition normally occurs inside the bulk region of the semiconductor.

Choose the **most appropriate** answer from the options given below :

(1) (A), (B), (C), (D) Only

(2) (A), (B) and (C) Only

(3) (B), (D), (E) Only

(4) (A), (B), (D), (E) Only

Options :

878270142213. 1

878270142214. 2

878270142215. 3

878270142216. 4

Question Number : 94 Question Id : 87827036171 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements :

(A) The origin of the punch through phenomena is the lowering of the barrier near the source.

(B) For a long channel device, a drain bias can change the effective channel length, but the barrier at the source end remains constant.

(C) For a short channel device, this barrier is no longer fixed.

(D) The lowering of the source barrier do not cause any injection of extra carriers.

(E) The punch through condition normally occurs inside the bulk region of the semiconductor.

Choose the **most appropriate** answer from the options given below :

(1) (A), (B), (C), (D) Only

(2) (A), (B) and (C) Only

(3) (B), (D), (E) Only

(4) (A), (B), (D), (E) Only

Options :

878270142213. 1

878270142214. 2

878270142215. 3

878270142216. 4

Question Number : 95 Question Id : 87827036172 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements :

(A) The charge coupled device (CCD) is a linear scanning system

(B) The charge coupled device is a non linear scanning system

(C) A charge coupled devices is used as a shift register

(D) A charge coupled device can not be used as a photo detector

Choose the **most appropriate** answer from the options given below :

(1) (A) and (C) Only

(2) (B) and (C) Only

(3) (C) and (D) Only

(4) (B) and (D) Only

Options :

878270142217. 1

878270142218. 2

878270142219. 3

878270142220. 4

Question Number : 95 Question Id : 87827036172 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements :

(A) The charge coupled device (CCD) is a linear scanning system

(B) The charge coupled device is a non linear scanning system

(C) A charge coupled devices is used as a shift register

(D) A charge coupled device can not be used as a photo detector

Choose the **most appropriate** answer from the options given below :

(1) (A) and (C) Only

(2) (B) and (C) Only

(3) (C) and (D) Only

(4) (B) and (D) Only

Options :

878270142217. 1

878270142218. 2

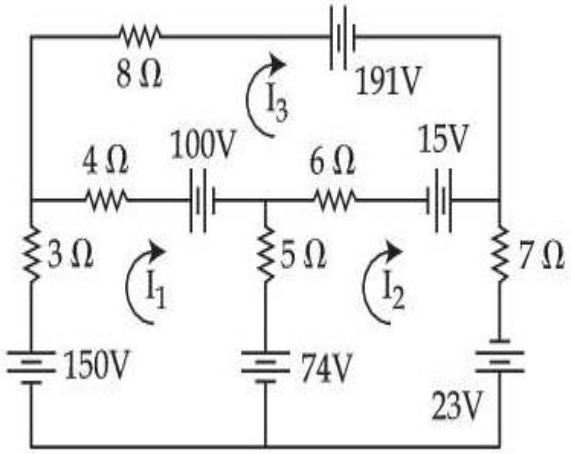
878270142219. 3

878270142220. 4

Question Number : 96 Question Id : 87827036173 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For the circuit given below, which are the correct two equations of Mesh current ?



(A) $12I_1 - 5I_2 - 4I_3 = -24$

(B) $5I_1 + 18I_2 + 6I_3 = -112$

(C) $-4I_1 - 6I_2 + 18I_3 = -106$

(D) $2I_1 + 3I_2 - 7I_3 = 106$

(E) $-5I_1 + 24I_2 - 6I_3 = 116$

Choose the **most appropriate** answer from the options given below :

(1) (B) and (D) Only

(2) (C) and (E) Only

(3) (A) and (C) Only

(4) (D) and (E) Only

Options :

878270142221. 1

878270142222. 2

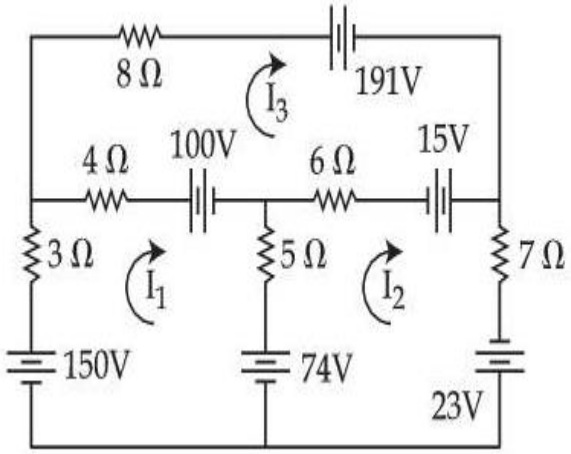
878270142223. 3

878270142224. 4

Question Number : 96 Question Id : 87827036173 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For the circuit given below, which are the correct two equations of Mesh current ?



(A) $12I_1 - 5I_2 - 4I_3 = -24$

(B) $5I_1 + 18I_2 + 6I_3 = -112$

(C) $-4I_1 - 6I_2 + 18I_3 = -106$

(D) $2I_1 + 3I_2 - 7I_3 = 106$

(E) $-5I_1 + 24I_2 - 6I_3 = 116$

Choose the **most appropriate** answer from the options given below :

(1) (B) and (D) Only

(2) (C) and (E) Only

(3) (A) and (C) Only

(4) (D) and (E) Only

Options :

878270142221. 1

878270142222. 2

878270142223. 3

878270142224. 4

Question Number : 97 Question Id : 87827036174 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In admittance parameters :

(A) y_{11} is short circuit input impedance

(B) y_{22} is open circuit o/p admittance

(C) y_{21} is short circuit transfer admittance

(D) y_{12} is open circuit transfer admittance

(E) y_{12} and y_{21} are both short circuit transfer admittances

Choose the **most appropriate** answer from the options given below :

(1) (A), (C), (E) Only

(2) (B), (C), (E) Only

(3) (A), (B), (C) Only

(4) (C), (D) Only

Options :

878270142225. 1

878270142226. 2

878270142227. 3

878270142228. 4

Question Number : 97 Question Id : 87827036174 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In admittance parameters :

(A) y_{11} is short circuit input impedance

(B) y_{22} is open circuit o/p admittance

(C) y_{21} is short circuit transfer admittance

(D) y_{12} is open circuit transfer admittance

(E) y_{12} and y_{21} are both short circuit transfer admittances

Choose the **most appropriate** answer from the options given below :

(1) (A), (C), (E) Only

(2) (B), (C), (E) Only

(3) (A), (B), (C) Only

(4) (C), (D) Only

Options :

878270142225. 1

878270142226. 2

878270142227. 3

878270142228. 4

Question Number : 98 Question Id : 87827036175 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

From the options given below :

(A) $x(t)\,\delta(t) = x(0)\,\delta(t)$ if $x(t)$ is continuous at $t = 0$

(B) $\int_1^2 \left(3t^2 + 1\right)\delta(t)\,dt = 4$ where $\delta(t)$ is Dirac Delta function

(C) $x[n] = (-0.5)^n u[n]$ is not an energy signal where, 4[n] is a unit step sequence

(D) $t\delta'(t) = -\delta(t)$ where $\delta(t)$ is Dirac Delta function

(E) $x(t) = t\,u(t)$ is neither an energy signal nor a power signal 4(t) is unit step function

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (B), (C) and (D) Only

(3) (A), (D) and (E) Only

(4) (C), (D) and (E) Only

Options :

878270142229. 1

878270142230. 2

878270142231. 3

878270142232. 4

Question Number : 98 Question Id : 87827036175 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

From the options given below :

(A) $x(t)\,\delta(t) = x(0)\,\delta(t)$ if $x(t)$ is continuous at $t = 0$

(B) $\int_1^2 \left(3t^2 + 1\right)\delta(t)\,dt = 4$ where $\delta(t)$ is Dirac Delta function

(C) $x[n] = (-0.5)^n u[n]$ is not an energy signal where, 4[n] is a unit step sequence

(D) $t\delta'(t) = -\delta(t)$ where $\delta(t)$ is Dirac Delta function

(E) $x(t) = t\,u(t)$ is neither an energy signal nor a power signal 4(t) is unit step function

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (B), (C) and (D) Only

(3) (A), (D) and (E) Only

(4) (C), (D) and (E) Only

Options :

878270142229. 1

878270142230. 2

878270142231. 3

878270142232. 4

Question Number : 99 Question Id : 87827036176 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements :

(A) The output voltage of a summing amplifier (inverting configuration) with three inputs V_A, V_B and V_C and input resistors R_A, R_B and R_C is $V_o = \left(1 + \frac{R_F}{R_A R_B R_C}\right)\left[\frac{V_A}{R_A} + \frac{V_B}{R_B} + \frac{V_C}{R_C}\right]$

(B) In a subtractor circuit, the output voltage is equal to voltage applied to non-inverting terminal minus voltage applied to inverting terminal

(C) The narrow band pass filter is called a Notch filter

(D) VCO is also called as frequency to voltage

(E) The all pass filter provides unity-gain with predictable phase shifts for different input frequencies

Choose the **most appropriate** answer from the options given below :

(1) (A) and (D) Only

(2) (C) and (E) Only

(3) (B) and (D) Only

(4) (B) and (E) Only

Options :

878270142233. 1

878270142234. 2

878270142235. 3

878270142236. 4

Question Number : 99 Question Id : 87827036176 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements :

(A) The output voltage of a summing amplifier (inverting configuration) with three inputs V_A, V_B and V_C and input resistors R_A, R_B and R_C is $V_o = \left(1 + \frac{R_F}{R_A R_B R_C}\right)\left[\frac{V_A}{R_A} + \frac{V_B}{R_B} + \frac{V_C}{R_C}\right]$

(B) In a subtractor circuit, the output voltage is equal to voltage applied to non-inverting terminal minus voltage applied to inverting terminal

(C) The narrow band pass filter is called a Notch filter

(D) VCO is also called as frequency to voltage

(E) The all pass filter provides unity-gain with predictable phase shifts for different input frequencies

Choose the **most appropriate** answer from the options given below :

(1) (A) and (D) Only

(2) (C) and (E) Only

(3) (B) and (D) Only

(4) (B) and (E) Only

Options :

878270142233. 1

878270142234. 2

878270142235. 3

878270142236. 4

Question Number : 100 Question Id : 87827036177 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

From the following statements :

(A) I_{DSS} is the maximum drain current for a JFET with a open circuit connection from gate to source and $V_{DS} > V_P$ (Pinch off voltage)

(B) The magnitude gain corresponding to a voltage gain of 100 dB is 1,00,000

(C) For any inverting amplifier, the input capacitance will be increased by a Miller effect capacitance sensitive to gain of amplifier and feedback capacitance (C_f) between input and output terminals of active device

(D) The Flight frequency transistor small signal AC equivalent circuit model i.e. Hybrid-π is known as Giacolcott model

(E) The transistor bias configuration having high stability factor are stable and relatively insensitive to temperature variations

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (A), (C) and (E) Only

(3) (B), (C) and (D) Only

(4) (C), (D) and (E) Only

Options :

878270142237. 1

878270142238. 2

878270142239. 3

878270142240. 4

Question Number : 100 Question Id : 87827036177 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

From the following statements :

(A) I_{DSS} is the maximum drain current for a JFET with a open circuit connection from gate to source and $V_{DS} > V_P$ (Pinch off voltage)

(B) The magnitude gain corresponding to a voltage gain of 100 dB is 1,00,000

(C) For any inverting amplifier, the input capacitance will be increased by a Miller effect capacitance sensitive to gain of amplifier and feedback capacitance (C_f) between input and output terminals of active device

(D) The Flight frequency transistor small signal AC equivalent circuit model i.e. Hybrid-π is known as Giacolcott model

(E) The transistor bias configuration having high stability factor are stable and relatively insensitive to temperature variations

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (A), (C) and (E) Only

(3) (B), (C) and (D) Only

(4) (C), (D) and (E) Only

Options :

878270142237. 1

878270142238. 2

878270142239. 3

878270142240. 4

Question Number : 101 Question Id : 87827036178 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements :

(A) An 8-input MUX can be implemented using any 4 variable function

(B) A 3-line to 8-line DEMUX can be used to implement any 4 variable functions

(C) A 64-input MUX can be built using nine 8-input MUXs

(D) A 6-line to 64-line DEMUX can be built using nine 3-line DEMUXs

Choose the **most appropriate** answer from the options given below :

(1) (A), (B), (C) and (D) Only

(2) (A), (B) and (D) Only

(3) (C) and (D) Only

(4) (A), (B) and (C) Only

Options :

878270142241. 1

878270142242. 2

878270142243. 3

878270142244. 4

Question Number : 101 Question Id : 87827036178 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements :

(A) An 8-input MUX can be implemented using any 4 variable function

(B) A 3-line to 8-line DEMUX can be used to implement any 4 variable functions

(C) A 64-input MUX can be built using nine 8-input MUXs

(D) A 6-line to 64-line DEMUX can be built using nine 3-line DEMUXs

Choose the **most appropriate** answer from the options given below :

(1) (A), (B), (C) and (D) Only

(2) (A), (B) and (D) Only

(3) (C) and (D) Only

(4) (A), (B) and (C) Only

Options :

878270142241. 1

878270142242. 2

878270142243. 3

878270142244. 4

Question Number : 102 Question Id : 87827036179 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements regarding registers and latches :

(A) Registers are made of edge triggered flip-flops whereas latched are made from level triggered flip flops

(B) Registers are temporary storage devices whereas latches are not

(C) A latch employs cross coupled feed back connections

(D) A register stores a binary word whereas a latch does not

Choose the **most appropriate** answer from the options given below :

(1) (A) and (B) Only

(2) (A) and (C) Only

(3) (B) and (C) Only

(4) (C) and (D) Only

Options :

878270142245. 1

878270142246. 2

878270142247. 3

878270142248. 4

Question Number : 102 Question Id : 87827036179 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements regarding registers and latches :

(A) Registers are made of edge triggered flip-flops whereas latched are made from level triggered flip flops

(B) Registers are temporary storage devices whereas latches are not

(C) A latch employs cross coupled feed back connections

(D) A register stores a binary word whereas a latch does not

Choose the **most appropriate** answer from the options given below :

(1) (A) and (B) Only

(2) (A) and (C) Only

(3) (B) and (C) Only

(4) (C) and (D) Only

Options :

878270142245. 1

878270142246. 2

878270142247. 3

878270142248. 4

Question Number : 103 Question Id : 87827036180 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements :

(A) When two signal numbers are added, an overflow is detected from the carry into the most significant position

(B) An overflow does not occur if the two numbers added are both negative

(C) If the carry into the sign bit position and carry out position are not equal, an overflow condition is produced

(D) A full adder is a logic circuit with there inputs and two outputs. The circuit adds 3 bits at a time, giving a sum and a carry output

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (A) and (C) Only

(3) (B), (C) and (D) Only

(4) (C) and (D) Only

Options :

878270142249. 1

878270142250. 2

878270142251. 3

878270142252. 4

Question Number : 103 Question Id : 87827036180 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following statements :

(A) When two signal numbers are added, an overflow is detected from the carry into the most significant position

(B) An overflow does not occur if the two numbers added are both negative

(C) If the carry into the sign bit position and carry out position are not equal, an overflow condition is produced

(D) A full adder is a logic circuit with there inputs and two outputs. The circuit adds 3 bits at a time, giving a sum and a carry output

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (A) and (C) Only

(3) (B), (C) and (D) Only

(4) (C) and (D) Only

Options :

878270142249. 1

878270142250. 2

878270142251. 3

878270142252. 4

Question Number : 104 Question Id : 87827036181 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In a 8051 microcontroller, ACALL (absolute call) instruction has the following interpretation :

(A) It is a two byte instruction

(B) It is a three byte instruction

(C) The target address of the subroutine must be within 2k bytes because only 11 bits of the 2 bytes are used for the address

(D) There is no difference between ACALL and LCALL in terms of saving the program counter on the stack

(E) The target address can be anywhere within 64k bytes

Choose the **most appropriate** answer from the options given below :

(1) (A), (C) and (D) Only

(2) (A), (C) and (E) Only

(3) (B), (C) and (D) Only

(4) (B), (C) and (E) Only

Options :

878270142253. 1

878270142254. 2

878270142255. 3

878270142256. 4

Question Number : 104 Question Id : 87827036181 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In a 8051 microcontroller, ACALL (absolute call) instruction has the following interpretation :

(A) It is a two byte instruction

(B) It is a three byte instruction

(C) The target address of the subroutine must be within 2k bytes because only 11 bits of the 2 bytes are used for the address

(D) There is no difference between ACALL and LCALL in terms of saving the program counter on the stack

(E) The target address can be anywhere within 64k bytes

Choose the **most appropriate** answer from the options given below :

(1) (A), (C) and (D) Only

(2) (A), (C) and (E) Only

(3) (B), (C) and (D) Only

(4) (B), (C) and (E) Only

Options :

878270142253. 1

878270142254. 2

878270142255. 3

878270142256. 4

Question Number : 105 Question Id : 87827036182 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In the following 8051 assembly language program :

```
MOV A, # 25H
MOV B, # 78H
MUL AB
```

(A) A = 11H, B = 58H

(B) A = 58H, B = 11H

(C) CY = 0 and OV = 1

(D) CY = 1 and OV = 1

Choose the **most appropriate** answer from the options given below :

(1) (A) and (C) Only

(2) (A) and (D) Only

(3) (B) and (C) Only

(4) (B) and (D) Only

Options :

878270142257. 1

878270142258. 2

878270142259. 3

878270142260. 4

Question Number : 105 Question Id : 87827036182 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In the following 8051 assembly language program :

```
MOV A, # 25H
MOV B, # 78H
MUL AB
```

(A) A = 11H, B = 58H

(B) A = 58H, B = 11H

(C) CY = 0 and OV = 1

(D) CY = 1 and OV = 1

Choose the **most appropriate** answer from the options given below :

(1) (A) and (C) Only

(2) (A) and (D) Only

(3) (B) and (C) Only

(4) (B) and (D) Only

Options :

878270142257. 1

878270142258. 2

878270142259. 3

878270142260. 4

Question Number : 106 Question Id : 87827036183 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A conventional magnetron has Anode Voltage = 26 kV, Beam Current = 29 A, $B_0 = 0.336$ wb/m^2, Radius of cathode cylinder = 5 cm, Radius of vane edge to center = 10 cm.

(A) The cyclotron angular frequency $\omega_c = 5.91 \times 10^6$ rad

(B) $\omega_c = 5.91 \times 10^{10}$ rad

(C) $\omega_c = 5.91 \times 10^{16}$ rad

(D) Cut off voltage = 139.50 kV

(E) Cut off voltage = 239.59 kV

Choose the **most appropriate** answer from the options given below :

(1) (A) and (E) Only

(2) (B) and (D) Only

(3) (A) and (D) Only

(4) (C) and (E) Only

Options :

878270142261. 1

878270142262. 2

878270142263. 3

878270142264. 4

Question Number : 106 Question Id : 87827036183 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A conventional magnetron has Anode Voltage = 26 kV, Beam Current = 29 A, $B_0 = 0.336$ wb/m^2, Radius of cathode cylinder = 5 cm, Radius of vane edge to center = 10 cm.

(A) The cyclotron angular frequency $\omega_c = 5.91 \times 10^6$ rad

(B) $\omega_c = 5.91 \times 10^{10}$ rad

(C) $\omega_c = 5.91 \times 10^{16}$ rad

(D) Cut off voltage = 139.50 kV

(E) Cut off voltage = 239.59 kV

Choose the **most appropriate** answer from the options given below :

(1) (A) and (E) Only

(2) (B) and (D) Only

(3) (A) and (D) Only

(4) (C) and (E) Only

Options :

878270142261. 1

878270142262. 2

878270142263. 3

878270142264. 4

Question Number : 107 Question Id : 87827036184 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For wave motion in perfect dielectrics following conditions are given :

(A) The material is loss less

(B) The material is lossy

(C) The medium is isotropic

(D) The medium is non-homogeneous

(E) The medium is homogeneous

Choose the **most appropriate** answer from the options given below :

(1) (A), (C) and (E) Only

(2) (A), (C) and (D) Only

(3) (B), (C) and (D) Only

(4) (A) and (C) Only

Options :

878270142265. 1

878270142266. 2

878270142267. 3

878270142268. 4

Question Number : 107 Question Id : 87827036184 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For wave motion in perfect dielectrics following conditions are given :

(A) The material is loss less

(B) The material is lossy

(C) The medium is isotropic

(D) The medium is non-homogeneous

(E) The medium is homogeneous

Choose the **most appropriate** answer from the options given below :

(1) (A), (C) and (E) Only

(2) (A), (C) and (D) Only

(3) (B), (C) and (D) Only

(4) (A) and (C) Only

Options :

878270142265. 1

878270142266. 2

878270142267. 3

878270142268. 4

Question Number : 108 Question Id : 87827036185 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For parallel plane transmission line with two conducting plates of conductivity σ, thickness = t, and separation of 'd' and dielectric parameters ϵ, μ and length 'b' following is given :

For $b >> d$

(A) $L = \mu b/t$

(B) $\text{Capacitance} = \frac{\epsilon b}{d}$

(C) $G = \frac{\sigma b}{s}$

(D) $Z_0 = \sqrt{\frac{\mu}{\epsilon}} \left(\frac{d}{b}\right)$

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) Only

(2) (A), (B), (D) Only

(3) (B), (C) Only

(4) (B), (C), (D) Only

Options :

878270142269. 1

878270142270. 2

878270142271. 3

878270142272. 4

Question Number : 108 Question Id : 87827036185 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For parallel plane transmission line with two conducting plates of conductivity σ, thickness = t, and separation of 'd' and dielectric parameters ϵ, μ and length 'b' following is given :

For $b >> d$

(A) $L = \mu b/t$

(B) $\text{Capacitance} = \frac{\epsilon b}{d}$

(C) $G = \frac{\sigma b}{s}$

(D) $Z_0 = \sqrt{\frac{\mu}{\epsilon}} \left(\frac{d}{b}\right)$

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) Only

(2) (A), (B), (D) Only

(3) (B), (C) Only

(4) (B), (C), (D) Only

Options :

878270142269. 1

878270142270. 2

878270142271. 3

878270142272. 4

Question Number : 109 Question Id : 87827036186 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The disadvantage of co-axial cable is/are :

(A) Support higher bandwidth than twisted pair cable

(B) Light weight

(C) Relatively expensive compared to twisted pair cable

(D) EMI resistant

(E) Doesn't at very high frequency

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) Only

(2) (C), (E) Only

(3) (B), (D), (E) Only

(4) (A), (D) Only

Options :

878270142273. 1

878270142274. 2

878270142275. 3

878270142276. 4

Question Number : 109 Question Id : 87827036186 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The disadvantage of co-axial cable is/are :

(A) Support higher bandwidth than twisted pair cable

(B) Light weight

(C) Relatively expensive compared to twisted pair cable

(D) EMI resistant

(E) Doesn't at very high frequency

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) Only

(2) (C), (E) Only

(3) (B), (D), (E) Only

(4) (A), (D) Only

Options :

878270142273. 1

878270142274. 2

878270142275. 3

878270142276. 4

Question Number : 110 Question Id : 87827036187 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

(A) Multimode fibre is less lossy than single mode
(B) The bandwidth of step index fibre is 50 MHz
(C) The graded index fibre has theoretically infinite bandwidth
(D) The step index fibre has numerical aperture of 0.2 to 0.5
(E) The graded index fibre has numerical aperture of 0.46 to 0.99

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) Only
(2) (B), (C), (D) Only
(3) (C), (D), (E) Only
(4) (A), (D) Only

Options :

878270142277. 1

878270142278. 2

878270142279. 3

878270142280. 4

Question Number : 110 Question Id : 87827036187 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

(A) Multimode fibre is less lossy than single mode
(B) The bandwidth of step index fibre is 50 MHz
(C) The graded index fibre has theoretically infinite bandwidth
(D) The step index fibre has numerical aperture of 0.2 to 0.5
(E) The graded index fibre has numerical aperture of 0.46 to 0.99

Choose the **most appropriate** answer from the options given below :

(1) (A), (B) Only
(2) (B), (C), (D) Only
(3) (C), (D), (E) Only
(4) (A), (D) Only

Options :

878270142277. 1

878270142278. 2

878270142279. 3

878270142280. 4

Question Number : 111 Question Id : 87827036188 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct in respect of Routh's stability criterion ?

(A) This stability orientation applies to polynomials with only finite number of terms
(B) When this criterion is applied to a control system, the information about absolute stability can be obtained directly from the coefficients of the characteristic equations
(C) The Routh's stability criterion tells whether or not there are unstable roots in polynomial equation without actually solving for than
(D) Routh's criterion is not related to system stability

Choose the **most appropriate** answer from the options given below :

(1) (A) and (B) Only
(2) (B) and (C) Only
(3) (C) and (D) Only
(4) (A), (B) and (C) Only

Options :

878270142281. 1

878270142282. 2

878270142283. 3

878270142284. 4

Question Number : 111 Question Id : 87827036188 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct in respect of Routh's stability criterion ?

(A) This stability orientation applies to polynomials with only finite number of terms

(B) When this criterion is applied to a control system, the information about absolute stability can be obtained directly from the coefficients of the characteristic equations

(C) The Routh's stability criterion tells whether or not there are unstable roots in polynomial equation without actually solving for than

(D) Routh's criterion is not related to system stability

Choose the **most appropriate** answer from the options given below :

(1) (A) and (B) Only

(2) (B) and (C) Only

(3) (C) and (D) Only

(4) (A), (B) and (C) Only

Options :

878270142281. 1

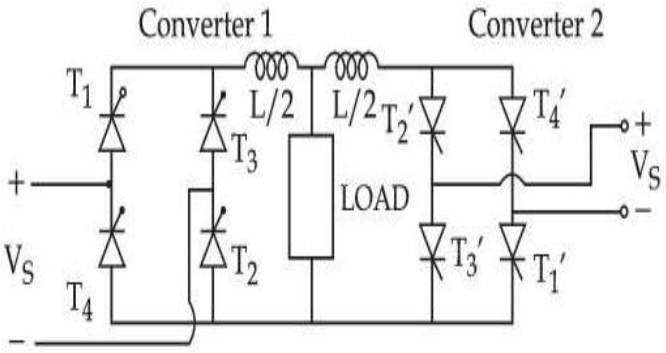
878270142282. 2

878270142283. 3

878270142284. 4

Question Number : 112 Question Id : 87827036189 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0



The above circuit is operated at 120 V - 60 Hz supply and the load resistance R = 20 Ω, L = 40 mH, delay angles are $\alpha_1 = 60°$, $\alpha_2 = 120°$. The value of :

(A) Peak circulating current = 11.250 A

(B) Peak circulating current = 6.250 A

(C) Peak current of converter 1 = 8.485 A

(D) Peak current of converter 1 = 19.735 A

Choose the **most appropriate** answer from the options given below :

(1) (A) and (D) Only

(2) (B) and (C) Only

(3) (B) and (D) Only

(4) (A) and (C) Only

Options :

878270142285. 1

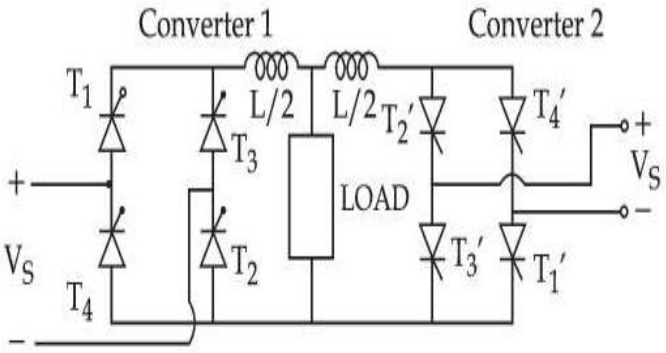
878270142286. 2

878270142287. 3

878270142288. 4

Question Number : 112 Question Id : 87827036189 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0



The above circuit is operated at 120 V - 60 Hz supply and the load resistance R = 20 Ω, L = 40 mH, delay angles are $\alpha_1 = 60°$, $\alpha_2 = 120°$. The value of :

(A) Peak circulating current = 11.250 A

(B) Peak circulating current = 6.250 A

(C) Peak current of converter 1 = 8.485 A

(D) Peak current of converter 1 = 19.735 A

Choose the **most appropriate** answer from the options given below :

(1) (A) and (D) Only

(2) (B) and (C) Only

(3) (B) and (D) Only

(4) (A) and (C) Only

Options :

878270142285. 1

878270142286. 2

878270142287. 3

878270142288. 4

Question Number : 113 Question Id : 87827036190 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In induction motors, following statements are given :

(A) The MMF wave travels during one cycle of the current, a distance twice the pole pitch or wavelength

(B) For a given pole pitch and frequency, the velocity of the travelling field keep varying

(C) The MMF wave travels during one and half cycle of the current, a distance twice the pole pitch of wavelength

(D) For a given pole pitch and frequency, the velocity of the travelling field is constant

Choose the **most appropriate** answer from the options given below :

(1) (B) and (D) Only

(2) (A) and (D) Only

(3) (C) and (D) Only

(4) (B) and (C) Only

Options :

878270142289. 1

878270142290. 2

878270142291. 3

878270142292. 4

Question Number : 113 Question Id : 87827036190 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In induction motors, following statements are given :

(A) The MMF wave travels during one cycle of the current, a distance twice the pole pitch or wavelength

(B) For a given pole pitch and frequency, the velocity of the travelling field keep varying

(C) The MMF wave travels during one and half cycle of the current, a distance twice the pole pitch of wavelength

(D) For a given pole pitch and frequency, the velocity of the travelling field is constant

Choose the **most appropriate** answer from the options given below :

(1) (B) and (D) Only

(2) (A) and (D) Only

(3) (C) and (D) Only

(4) (B) and (C) Only

Options :

878270142289. 1

878270142290. 2

878270142291. 3

878270142292. 4

Question Number : 114 Question Id : 87827036191 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

There are number of distinct advantages of the digital storage oscilloscope as given below :

(A) A waveform to be stored is digitized

(B) The waveform is stored in a digital memory

(C) The stored waveform can be displayed as and when required

(D) The cost is reduced as compared to conventional CRT

Choose the **correct** answer from the options given below :

(1) (A) and (B) Only

(2) (B) and (C) Only

(3) (B) and (D) Only

(4) (A), (B) and (C) Only

Options :

878270142293. 1

878270142294. 2

878270142295. 3

878270142296. 4

Question Number : 114 Question Id : 87827036191 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

There are number of distinct advantages of the digital storage oscilloscope as given below :

(A) A waveform to be stored is digitized

(B) The waveform is stored in a digital memory

(C) The stored waveform can be displayed as and when required

(D) The cost is reduced as compared to conventional CRT

Choose the **correct** answer from the options given below :

(1) (A) and (B) Only

(2) (B) and (C) Only

(3) (B) and (D) Only

(4) (A), (B) and (C) Only

Options :

878270142293. 1

878270142294. 2

878270142295. 3

878270142296. 4

Question Number : 115 Question Id : 87827036192 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Read the following statements with respect to a Wein bridge :

(A) It is an AC bridge to measure frequency

(B) It is a DC bridge to measure amplitude

(C) It is used as frequency determining element

(D) It is used as band pass filter

(E) It is used as Notch filter

Choose the **correct** answer from the options given below :

(1) (A) and (C) Only

(2) (A) and (D) Only

(3) (B) and (C) Only

(4) (A), (C) and (E) Only

Options :

878270142297. 1

878270142298. 2

878270142299. 3

878270142300. 4

Question Number : 115 Question Id : 87827036192 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Read the following statements with respect to a Wein bridge :

(A) It is an AC bridge to measure frequency

(B) It is a DC bridge to measure amplitude

(C) It is used as frequency determining element

(D) It is used as band pass filter

(E) It is used as Notch filter

Choose the **correct** answer from the options given below :

(1) (A) and (C) Only

(2) (A) and (D) Only

(3) (B) and (C) Only

(4) (A), (C) and (E) Only

Options :

878270142297. 1

878270142298. 2

878270142299. 3

878270142300. 4

Question Number : 116 Question Id : 87827036193 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	MODFET	(I)	Voltage controller resistor
(B)	MOSFET	(II)	Fill factor
(C)	Solar cell	(III)	PN junction placed back to back
(D)	JFET	(IV)	Two dimensional electron gas

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

(2) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(3) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(4) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

Options :

878270142301. 1

878270142302. 2

878270142303. 3

878270142304. 4

Question Number : 116 Question Id : 87827036193 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	MODFET	(I)	Voltage controller resistor
(B)	MOSFET	(II)	Fill factor
(C)	Solar cell	(III)	PN junction placed back to back
(D)	JFET	(IV)	Two dimensional electron gas

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

(2) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(3) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(4) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

Options :

878270142301. 1

878270142302. 2

878270142303. 3

878270142304. 4

Question Number : 117 Question Id : 87827036194 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	Annealing	(I)	Isolation
(B)	Sealing	(II)	Doping
(C)	Ion implication	(III)	Packing density
(D)	Oxidation	(IV)	Crystal restoration

Choose the **correct** answer from the options given below :

(1) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

(2) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(3) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

Options :

878270142305. 1

878270142306. 2

878270142307. 3

878270142308. 4

Question Number : 117 Question Id : 87827036194 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	Annealing	(I)	Isolation
(B)	Sealing	(II)	Doping
(C)	Ion implication	(III)	Packing density
(D)	Oxidation	(IV)	Crystal restoration

Choose the **correct** answer from the options given below :

(1) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

(2) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(3) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

Options :

878270142305. 1

878270142306. 2

878270142307. 3

878270142308. 4

Question Number : 118 Question Id : 87827036195 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I **Sequence x[n]**		**List - II** **Fourier Transform X(Ω)**
(A)	$e^{i\Omega_o^n} x[n]$	(I)	$(1-e^{-i\Omega}) \times (\Omega)$
(B)	$nx[n]$	(II)	$x(\Omega - \Omega_o)$
(C)	$x[n]-x[n-1]$	(III)	$e^{-i\Omega n_o}$
(D)	$\delta[n-n_o]$	(IV)	$j\frac{d\times(\Omega)}{d\Omega}$

Choose the **correct** answer from the options given below :

(1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(2) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

(4) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

Options :

878270142309. 1

878270142310. 2

878270142311. 3

878270142312. 4

Question Number : 118 Question Id : 87827036195 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I **Sequence x[n]**		**List - II** **Fourier Transform X(Ω)**
(A)	$e^{i\Omega_o^n} x[n]$	(I)	$(1-e^{-i\Omega}) \times (\Omega)$
(B)	$nx[n]$	(II)	$x(\Omega - \Omega_o)$
(C)	$x[n]-x[n-1]$	(III)	$e^{-i\Omega n_o}$
(D)	$\delta[n-n_o]$	(IV)	$j\frac{d\times(\Omega)}{d\Omega}$

Choose the **correct** answer from the options given below :

(1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(2) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

(4) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

Options :

878270142309. 1

878270142310. 2

878270142311. 3

878270142312. 4

Question Number : 119 Question Id : 87827036196 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I **Feedback connection type**		**List - II** **Input/output impedance**
(A)	Voltage series feedback	(I)	$Z_{of} = \frac{Z_o}{1+\beta A}$
(B)	Voltage shunt feedback	(II)	$Z_{of} = Z_o(1+\beta A)$
(C)	Current series feedback	(III)	$Z_{if} = \frac{Z_i}{(1+\beta A)}$
(D)	Current shunt feedback	(IV)	$Z_{if} = Z_i(1+\beta A)$

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

(2) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

(3) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

(4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Options :

878270142313. 1

878270142314. 2

878270142315. 3

878270142316. 4

Question Number : 119 Question Id : 87827036196 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I Feedback connection type		**List - II** Input/output impedance
(A)	Voltage series feedback	(I)	$Z_{of} = \frac{Z_o}{1+\beta A}$
(B)	Voltage shunt feedback	(II)	$Z_{of} = Z_o(1+\beta A)$
(C)	Current series feedback	(III)	$Z_{if} = \frac{Z_i}{(1+\beta A)}$
(D)	Current shunt feedback	(IV)	$Z_{if} = Z_i(1+\beta A)$

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

(2) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

(3) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

(4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Options :

878270142313. 1

878270142314. 2

878270142315. 3

878270142316. 4

Question Number : 120 Question Id : 87827036197 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match List - I with List - II.

List - I	List - II
(A) EPROM	(I) AND gate programmable OR gate permanently wired
(B) PLA	(II) Both AND and OR gates are programmable
(C) Generic Array Logic (GAL)	(III) AND gate programmable, output permanently hard wired but may be taken through register or tristate gate programmable
(D) PAL	(IV) AND gate permanently hard wired OR gate programmable

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

(2) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

(3) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

(4) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

Options :

878270142317. 1

878270142318. 2

878270142319. 3

878270142320. 4

Question Number : 120 Question Id : 87827036197 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match List - I with List - II.

List - I	List - II
(A) EPROM	(I) AND gate programmable OR gate permanently wired
(B) PLA	(II) Both AND and OR gates are programmable
(C) Generic Array Logic (GAL)	(III) AND gate programmable, output permanently hard wired but may be taken through register or tristate gate programmable
(D) PAL	(IV) AND gate permanently hard wired OR gate programmable

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

(2) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

(3) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

(4) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

Options :

878270142317. 1

878270142318. 2

878270142319. 3

878270142320. 4

Question Number : 121 Question Id : 87827036198 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I **8086 Instruction**		**List - II** **Addressing mode**
(A)	MOV BX, AX	(I)	Register Relative Addressing
(B)	MOV AX, 50H[BX]	(II)	Direct Addressing
(C)	MOV AX, [BX]	(III)	Register addressing
(D)	MOV AX, [2000H]	(IV)	Register Indirect Addressing

Choose the **correct** answer from the options given below :

(1) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

(2) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

(4) (A)-(I), (B)-(IV), (C)-(II), (D)-(III)

Options :

878270142321. 1

878270142322. 2

878270142323. 3

878270142324. 4

Question Number : 121 Question Id : 87827036198 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I **8086 Instruction**		**List - II** **Addressing mode**
(A)	MOV BX, AX	(I)	Register Relative Addressing
(B)	MOV AX, 50H[BX]	(II)	Direct Addressing
(C)	MOV AX, [BX]	(III)	Register addressing
(D)	MOV AX, [2000H]	(IV)	Register Indirect Addressing

Choose the **correct** answer from the options given below :

(1) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

(2) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

(4) (A)-(I), (B)-(IV), (C)-(II), (D)-(III)

Options :

878270142321. 1

878270142322. 2

878270142323. 3

878270142324. 4

Question Number : 122 Question Id : 87827036199 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I Microwave devices		**List - II** Name of device
(A)	Microwave transistor	(I)	CCD
(B)	Field effect transistor	(II)	InP diodes
(C)	Transferred electron device	(III)	Read diode
(D)	Avalauche transit time device	(IV)	HBT

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

(2) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

(3) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(4) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)

Options :

878270142325. 1

878270142326. 2

878270142327. 3

878270142328. 4

Question Number : 122 Question Id : 87827036199 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I		**List - II**
	Microwave devices		**Name of device**
(A)	Microwave transistor	(I)	CCD
(B)	Field effect transistor	(II)	InP diodes
(C)	Transferred electron device	(III)	Read diode
(D)	Avalauche transit time device	(IV)	HBT

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

(2) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

(3) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(4) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)

Options :

878270142325. 1

878270142326. 2

878270142327. 3

878270142328. 4

Question Number : 123 Question Id : 87827036200 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	White noise	(I)	Reduces antenna height
(B)	RMS noise voltage	(II)	$P_C\left(\frac{m^2}{2}\right)$
(C)	Modulation	(III)	Inversely proportional to $\sqrt{T}$
(D)	P_{DSBSC}	(IV)	Johnson Noise

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

(2) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(3) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

Options :

878270142329. 1

878270142330. 2

878270142331. 3

878270142332. 4

Question Number : 123 Question Id : 87827036200 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	White noise	(I)	Reduces antenna height
(B)	RMS noise voltage	(II)	$P_C\left(\frac{m^2}{2}\right)$
(C)	Modulation	(III)	Inversely proportional to $\sqrt{T}$
(D)	P_{DSBSC}	(IV)	Johnson Noise

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

(2) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(3) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

Options :

878270142329. 1

878270142330. 2

878270142331. 3

878270142332. 4

Question Number : 124 Question Id : 87827036201 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	Electrical resistance	(I)	°C/W
(B)	Thermal resistance	(II)	W
(C)	Time constant	(III)	RC
(D)	Rate of heat transfer	(IV)	V/A

Choose the **correct** answer from the options given below :

(1) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)

(2) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

(3) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

(4) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

Options :

878270142333. 1

878270142334. 2

878270142335. 3

878270142336. 4

Question Number : 124 Question Id : 87827036201 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	Electrical resistance	(I)	°C/W
(B)	Thermal resistance	(II)	W
(C)	Time constant	(III)	RC
(D)	Rate of heat transfer	(IV)	V/A

Choose the **correct** answer from the options given below :

(1) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)

(2) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

(3) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

(4) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

Options :

878270142333. 1

878270142334. 2

878270142335. 3

878270142336. 4

Question Number : 125 Question Id : 87827036202 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I Transducers		**List - II** Typical Applications
(A)	Potentiometric device	(I)	Relative humidity
(B)	Resistance hygrometer	(II)	Velocity
(C)	Dielectric gauge	(III)	Displacement
(D)	Moving coil generator	(IV)	Thickness

Choose the **correct** answer from the options given below :

(1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(2) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

(3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

(4) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

Options :

878270142337. 1

878270142338. 2

878270142339. 3

878270142340. 4

Question Number : 125 Question Id : 87827036202 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match **List - I** with **List - II**.

	List - I		**List - II**
	Transducers		**Typical Applications**
(A)	Potentiometric device	(I)	Relative humidity
(B)	Resistance hygrometer	(II)	Velocity
(C)	Dielectric gauge	(III)	Displacement
(D)	Moving coil generator	(IV)	Thickness

Choose the **correct** answer from the options given below :

(1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(2) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

(3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

(4) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

Options :

878270142337. 1

878270142338. 2

878270142339. 3

878270142340. 4

Question Number : 126 Question Id : 87827036203 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in ascending order based on their diffusivity :

(A) Boron

(B) Arsenic

(C) Antimony

(D) Phosphorus

Choose the **most appropriate** answer from the options given below :

(1) (C), (A), (B), (D)

(2) (C), (A), (D), (B)

(3) (A), (B), (C), (D)

(4) (B), (C), (D), (A)

Options :

878270142341. 1

878270142342. 2

878270142343. 3

878270142344. 4

Question Number : 126 Question Id : 87827036203 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in ascending order based on their diffusivity :

(A) Boron

(B) Arsenic

(C) Antimony

(D) Phosphorus

Choose the **most appropriate** answer from the options given below :

(1) (C), (A), (B), (D)

(2) (C), (A), (D), (B)

(3) (A), (B), (C), (D)

(4) (B), (C), (D), (A)

Options :

878270142341. 1

878270142342. 2

878270142343. 3

878270142344. 4

Question Number : 127 Question Id : 87827036204 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The Debye length is a characteristic length for semiconductor. Arrange the doping density given below in such a way that Debye length changes from maximum to minimum.

(A) $N = 10^{15} cm^{-3}$

(B) $N = 10^{17} cm^{-3}$

(C) $N = 3 \times 10^{15} cm^{-3}$

(D) $N = 10^{16} cm^{-3}$

(E) $N = 5 \times 10^{16} cm^{-3}$

Choose the **most appropriate** answer from the options given below :

(1) (B), (E), (D), (C), (A)

(2) (C), (E), (D), (B), (A)

(3) (A), (C), (D), (E), (B)

(4) (D), (A), (B), (C), (E)

Options :

878270142345. 1

878270142346. 2

878270142347. 3

878270142348. 4

Question Number : 127 Question Id : 87827036204 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The Debye length is a characteristic length for semiconductor. Arrange the doping density given below in such a way that Debye length changes from maximum to minimum.

(A) $N = 10^{15} cm^{-3}$

(B) $N = 10^{17} cm^{-3}$

(C) $N = 3 \times 10^{15} cm^{-3}$

(D) $N = 10^{16} cm^{-3}$

(E) $N = 5 \times 10^{16} cm^{-3}$

Choose the **most appropriate** answer from the options given below :

(1) (B), (E), (D), (C), (A)

(2) (C), (E), (D), (B), (A)

(3) (A), (C), (D), (E), (B)

(4) (D), (A), (B), (C), (E)

Options :

878270142345. 1

878270142346. 2

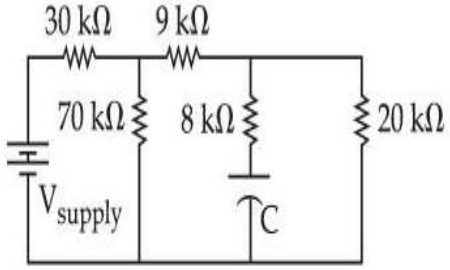
878270142347. 3

878270142348. 4

Question Number : 128 Question Id : 87827036205 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the time constant in descending order, for the circuit given below (having different combinations of V_{supply} and Capacitor (C))



(A) $V_{supply} = 250$ V ; $C = 3$ μF

(B) $V_{supply} = 150$ V ; $C = 1$ μF

(C) $V_{supply} = 100$ V ; $C = 2$ μF

(D) $V_{supply} = 250$ V ; $C = 6$ μF

(E) $V_{supply} = 80$ V ; $C = 0.5$ μF

Choose the **most appropriate** answer from the options given below :

(1) (A), (C), (B), (E), (D)

(2) (C), (E), (A), (B), (D)

(3) (B), (D), (A), (C), (E)

(4) (D), (A), (C), (B), (E)

Options :

878270142349. 1

878270142350. 2

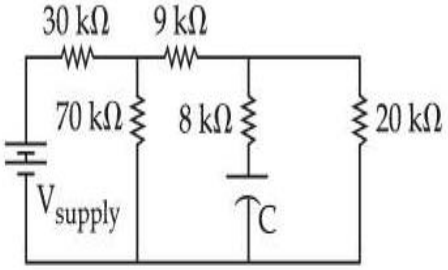
878270142351. 3

878270142352. 4

Question Number : 128 Question Id : 87827036205 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the time constant in descending order, for the circuit given below (having different combinations of V_{supply} and Capacitor (C))



(A) $V_{supply} = 250$ V ; $C = 3$ μF

(B) $V_{supply} = 150$ V ; $C = 1$ μF

(C) $V_{supply} = 100$ V ; $C = 2$ μF

(D) $V_{supply} = 250$ V ; $C = 6$ μF

(E) $V_{supply} = 80$ V ; $C = 0.5$ μF

Choose the **most appropriate** answer from the options given below :

(1) (A), (C), (B), (E), (D)

(2) (C), (E), (A), (B), (D)

(3) (B), (D), (A), (C), (E)

(4) (D), (A), (C), (B), (E)

Options :

878270142349. 1

878270142350. 2

878270142351. 3

878270142352. 4

Question Number : 129 Question Id : 87827036206 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For an Emitter Bias BJT configuration arrange stability factor $S(I_w)$ in descending order if $\beta = 50$.
R_B is base resistance and RE is emitter resistance.

(A) $R_E = 0.1\ R_B$

(B) $R_B = 60\ R_E$

(C) $R_B = 100\ R_E$

(D) $R_E = 10\ R_B$

(E) $R_B = 30\ R_E$

Choose the **most appropriate** answer from the options given below :

(1) (A), (C), (D), (B), (E)

(2) (C), (B), (E), (A), (D)

(3) (D), (C), (A), (B), (E)

(4) (B), (E), (A), (C), (D)

Options :

878270142353. 1

878270142354. 2

878270142355. 3

878270142356. 4

Question Number : 129 Question Id : 87827036206 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For an Emitter Bias BJT configuration arrange stability factor $S(I_w)$ in descending order if $\beta = 50$.
R_B is base resistance and RE is emitter resistance.

(A) $R_E = 0.1\ R_B$

(B) $R_B = 60\ R_E$

(C) $R_B = 100\ R_E$

(D) $R_E = 10\ R_B$

(E) $R_B = 30\ R_E$

Choose the **most appropriate** answer from the options given below :

(1) (A), (C), (D), (B), (E)

(2) (C), (B), (E), (A), (D)

(3) (D), (C), (A), (B), (E)

(4) (B), (E), (A), (C), (D)

Options :

878270142353. 1

878270142354. 2

878270142355. 3

878270142356. 4

Question Number : 130 Question Id : 87827036207 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given that for a logic family :

(A) V_{OH} is the maximum output high level voltage

(B) V_{OL} is the maximum input low level voltage

(C) V_{IH} is the minimum input acceptable input high voltage level

(D) V_{IL} is the minimum acceptable input low voltage level

Choose the **most appropriate** answer from the options given below :

(1) (C), (A), (D), (B)

(2) (A), (C), (D), (B)

(3) (C), (A), (B), (D)

(4) (A), (C), (B), (D)

Options :

878270142357. 1

878270142358. 2

878270142359. 3

878270142360. 4

Question Number : 130 Question Id : 87827036207 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given that for a logic family :

(A) V_{OH} is the maximum output high level voltage

(B) V_{OL} is the maximum input low level voltage

(C) V_{IH} is the minimum input acceptable input high voltage level

(D) V_{IL} is the minimum acceptable input low voltage level

Choose the **most appropriate** answer from the options given below :

(1) (C), (A), (D), (B)

(2) (A), (C), (D), (B)

(3) (C), (A), (B), (D)

(4) (A), (C), (B), (D)

Options :

878270142357. 1

878270142358. 2

878270142359. 3

878270142360. 4

Question Number : 131 Question Id : 87827036208 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following interrupts in order of their priority upon reset in case of 8051 micro controller.

(A) INT 0

(B) INT 1

(C) TF 0

(D) TF 1

(E) $(R_1 + T_1)$

Choose the **most appropriate** answer from the options given below :

(1) (A), (C), (B), (D), (E)

(2) (A), (B), (C), (E), (D)

(3) (B), (C), (A), (D), (E)

(4) (B), (C), (E), (D), (A)

Options :

878270142361. 1

878270142362. 2

878270142363. 3

878270142364. 4

Question Number : 131 Question Id : 87827036208 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following interrupts in order of their priority upon reset in case of 8051 micro controller.

(A) INT 0

(B) INT 1

(C) TF 0

(D) TF 1

(E) $(R_1 + T_1)$

Choose the **most appropriate** answer from the options given below :

(1) (A), (C), (B), (D), (E)

(2) (A), (B), (C), (E), (D)

(3) (B), (C), (A), (D), (E)

(4) (B), (C), (E), (D), (A)

Options :

878270142361. 1

878270142362. 2

878270142363. 3

878270142364. 4

Question Number : 132 Question Id : 87827036209 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following materials with respect to their relative dielectric constants in descending orders :

(A) Ge

(B) C

(C) CdS

(D) TiO_2

Choose the **most appropriate** answer from the options given below :

(1) (D), (B), (C), (A)

(2) (D), (A), (C), (B)

(3) (D), (C), (B), (A)

(4) (D), (A), (B), (C)

Options :

878270142365. 1

878270142366. 2

878270142367. 3

878270142368. 4

Question Number : 132 Question Id : 87827036209 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following materials with respect to their relative dielectric constants in descending orders :

(A) Ge

(B) C

(C) CdS

(D) TiO_2

Choose the **most appropriate** answer from the options given below :

(1) (D), (B), (C), (A)

(2) (D), (A), (C), (B)

(3) (D), (C), (B), (A)

(4) (D), (A), (B), (C)

Options :

878270142365. 1

878270142366. 2

878270142367. 3

878270142368. 4

Question Number : 133 Question Id : 87827036210 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The FM transmitters have the following blocks as per the following correct sequence :

(A) Crystal Oscillator

(B) Antenna

(C) Frequency multiplier

(D) Phase modulate/Audio source

(E) Power amplifier

Choose the **most appropriate** answer from the options given below :

(1) (A), (B), (C), (D), (E)

(2) (B), (C), (E), (D), (A)

(3) (A), (E), (C), (B), (D)

(4) (A), (D), (C), (E), (B)

Options :

878270142369. 1

878270142370. 2

878270142371. 3

878270142372. 4

Question Number : 133 Question Id : 87827036210 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The FM transmitters have the following blocks as per the following correct sequence :

(A) Crystal Oscillator

(B) Antenna

(C) Frequency multiplier

(D) Phase modulate/Audio source

(E) Power amplifier

Choose the **most appropriate** answer from the options given below :

(1) (A), (B), (C), (D), (E)

(2) (B), (C), (E), (D), (A)

(3) (A), (E), (C), (B), (D)

(4) (A), (D), (C), (E), (B)

Options :

878270142369. 1

878270142370. 2

878270142371. 3

878270142372. 4

Question Number : 134 Question Id : 87827036211 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following controllers for their system complexity and arrange them in increasing order of complexity.

(A) Proportional controller

(B) Proportional plus derivative controller

(C) Proportional plus integral plus derivative controller

(D) Proportional plus integral

Choose the **most appropriate** answer from the options given below :

(1) (A), (C), (B), (D)

(2) (A), (B), (D), (C)

(3) (C), (B), (A), (C)

(4) (B), (C), (A), (D)

Options :

878270142373. 1

878270142374. 2

878270142375. 3

878270142376. 4

Question Number : 134 Question Id : 87827036211 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following controllers for their system complexity and arrange them in increasing order of complexity.

(A) Proportional controller

(B) Proportional plus derivative controller

(C) Proportional plus integral plus derivative controller

(D) Proportional plus integral

Choose the **most appropriate** answer from the options given below :

(1) (A), (C), (B), (D)

(2) (A), (B), (D), (C)

(3) (C), (B), (A), (C)

(4) (B), (C), (A), (D)

Options :

878270142373. 1

878270142374. 2

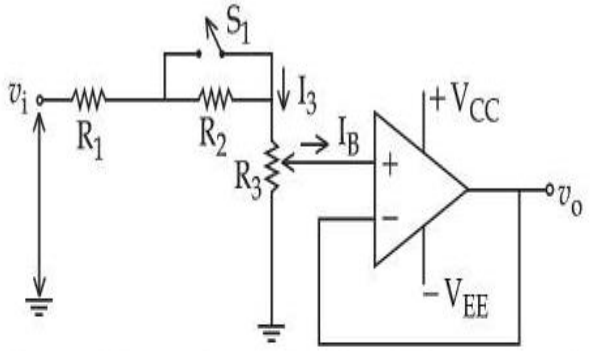
878270142375. 3

878270142376. 4

Question Number : 135 Question Id : 87827036212 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following circuit, the switch S_1 allows the output to switch between two ranges of amplitudes from 0-0.1 V and 0-1 V.



Arrange these values of R_1, R_2 and R_3 in increasing order.

(A) Value of R_1

(B) Value of R_2

(C) Value of R_3

Choose the **most appropriate** answer from the options given below :

(1) (C), (A), (B)

(2) (A), (B), (C)

(3) (B), (C), (A)

(4) (C), (B), (A)

Options :

878270142377. 1

878270142378. 2

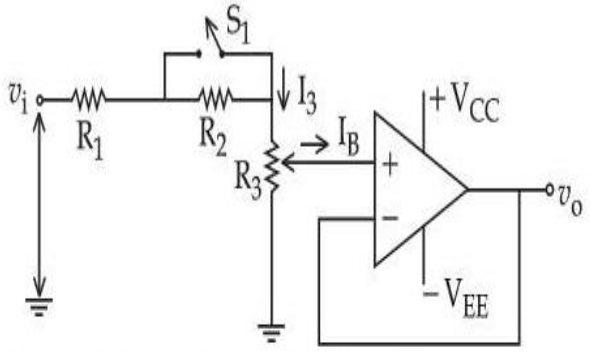
878270142379. 3

878270142380. 4

Question Number : 135 Question Id : 87827036212 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Consider the following circuit, the switch S_1 allows the output to switch between two ranges of amplitudes from 0-0.1 V and 0-1 V.



Arrange these values of R_1, R_2 and R_3 in increasing order.

(A) Value of R_1

(B) Value of R_2

(C) Value of R_3

Choose the **most appropriate** answer from the options given below :

(1) (C), (A), (B)

(2) (A), (B), (C)

(3) (B), (C), (A)

(4) (C), (B), (A)

Options :

878270142377. 1

878270142378. 2

878270142379. 3

878270142380. 4

Question Number : 136 Question Id : 87827036213 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : A tunnel diode consists of simple p-n junction mode of degenerate semiconductor. The current voltage characteristics consists of three components and shows the negative differential region over part of the forward characteristics.

Reason (R) : In tunnel diode the p-side is highly doped and n-side is highly doped and also used as detector.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

878270142381. 1

878270142382. 2

878270142383. 3

878270142384. 4

Question Number : 136 Question Id : 87827036213 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : A tunnel diode consists of simple p-n junction mode of degenerate semiconductor. The current voltage characteristics consists of three components and shows the negative differential region over part of the forward characteristics.

Reason (R) : In tunnel diode the p-side is highly doped and n-side is highly doped and also used as detector.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

878270142381. 1

878270142382. 2

878270142383. 3

878270142384. 4

Question Number : 137 Question Id : 87827036214 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : Dual-slope A/D converter is most preferred A/D conversion approach in digital multimeters.

Reason (R) : Dual-slop A/D converter provides high accuracy in A/D conversion, while at the same time suppressing the num effect on the input signal.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

878270142385. 1

878270142386. 2

878270142387. 3

878270142388. 4

Question Number : 137 Question Id : 87827036214 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : Dual-slope A/D converter is most preferred A/D conversion approach in digital multimeters.

Reason (R) : Dual-slop A/D converter provides high accuracy in A/D conversion, while at the same time suppressing the num effect on the input signal.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

878270142385. 1

878270142386. 2

878270142387. 3

878270142388. 4

Question Number : 138 Question Id : 87827036215 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : For 8086 microprocessor, the CS:IP loaded in the beginning with the required address from which the execution is to be started.

Reason (R) : The microprocessor does not perform the next fetch operation till at least one byte of the instruction queue is emptied.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

878270142389. 1

878270142390. 2

878270142391. 3

878270142392. 4

Question Number : 138 Question Id : 87827036215 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : For 8086 microprocessor, the CS:IP loaded in the beginning with the required address from which the execution is to be started.

Reason (R) : The microprocessor does not perform the next fetch operation till at least one byte of the instruction queue is emptied.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

878270142389. 1

878270142390. 2

878270142391. 3

878270142392. 4

Question Number : 139 Question Id : 87827036216 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : Synchronous machine is used as a motor and a generator also.

Reason (R) : Synchronous machine can operate at constant speeds and variable frequencies under steady state.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

878270142393. 1

878270142394. 2

878270142395. 3

878270142396. 4

Question Number : 139 Question Id : 87827036216 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : Synchronous machine is used as a motor and a generator also.

Reason (R) : Synchronous machine can operate at constant speeds and variable frequencies under steady state.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

878270142393. 1

878270142394. 2

878270142395. 3

878270142396. 4

Question Number : 140 Question Id : 87827036217 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : The calorimetric method of pH measurement is based on the assumption that if an indicator has the same colour in two solutions, then the pH of both the solutions are same.

Reason (R) : The colour developed depends not only on the pH but also on other factors.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

878270142397. 1

878270142398. 2

878270142399. 3

878270142400. 4

Question Number : 140 Question Id : 87827036217 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : The calorimetric method of pH measurement is based on the assumption that if an indicator has the same colour in two solutions, then the pH of both the solutions are same.

Reason (R) : The colour developed depends not only on the pH but also on other factors.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

878270142397. 1

878270142398. 2

878270142399. 3

878270142400. 4

Sub-Section Number :	2
Sub-Section Id :	8782701528
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Id : 87827036218 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (141 to 145)

Question Label : Comprehension

Diffusion of impurity atoms in silicon is important in silicon integrated circuit processing. The idea of using diffusion techniques to alter the type of conductivity in silicon or germanium was disclosed in a patent by Pfann. Since then various ways of introducing dopants into silicon by diffusion have been studied with the goal of controlling dopant distribution, total dopant concentration, its uniformity reproducibility, and of processing a large number of device wafers in a batch to reduce the manufacturing cost. The diffusion is used to form bases, emitters and resistors in bipolar devices technology, to form source, and drain regions and to dope polgsilicon in mos device technology. Dopant atoms that span a wide range of concentrations can be introduced in to silicon in many ways.

Sub questions

Question Number : 141 Question Id : 87827036219 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The idea of using diffusion techniques was disclosed in patent by Pfann in the year :

(1) 1948
(2) 1952
(3) 1958
(4) 1960

Options :

878270142401. 1

878270142402. 2

878270142403. 3

878270142404. 4

Question Number : 142 Question Id : 87827036220 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A thin layer of dopant is deposited onto silicon surface with a fixed total amount of dopants Q_T per unit area. If D is the diffusivity of dopants, than the surface concentration is :

(1) $C_S = Q_T$

(2) $C_S = \frac{Q_T}{\sqrt{\pi Dt}} \exp\left(\frac{-x^2}{4Dt}\right)$

(3) $C_S = \frac{Q_T}{\sqrt{\pi Dt}}$

(4) $C_S = \frac{Q_T}{Dt}$

Options :

878270142405. 1

878270142406. 2

878270142407. 3

878270142408. 4

Question Number : 143 Question Id : 87827036221 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a diffused layer that forms a p-n junction an average sheet resistance R_S is defined and related to junction depth x_j, the carrier mobility μ, and impurity distribution $C(x)$ as :

(1) $R_S = q \int_0^{x_j} \mu C(x)\, dx$

(2) $R_S = \frac{RT}{q} \int_0^{x_j} \mu C(x)\, dx$

(3) $R_S = \frac{1}{q \int_0^{x_j} \mu C(x)\, dx}$

(4) $R_S = \frac{q}{RT \int_0^{x_j} \mu C(x)\, dx}$

Options :

878270142409. 1

878270142410. 2

878270142411. 3

878270142412. 4

Question Number : 144 Question Id : 87827036222 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Fick's second law of diffusion in one dimensional form can be expressed as :

(1) $\frac{\partial C(x,t)}{\partial t} = \frac{\partial}{\partial x}\left[D\frac{\partial C(x,t)}{\partial x}\right]$

(2) $\frac{\partial C(x,t)}{\partial x} = \frac{\partial}{\partial t}\left[D\frac{\partial C(x,t)}{\partial t}\right]$

(3) $\frac{\partial C(x,t)}{\partial t} = \frac{\partial}{\partial t}\left[D\frac{\partial C(x,t)}{\partial x}\right]$

(4) $\frac{\partial C(x,t)}{\partial t} = \frac{\partial}{\partial x}\left[D\frac{\partial C(x,t)}{\partial t}\right]$

Options :

878270142413. 1

878270142414. 2

878270142415. 3

878270142416. 4

Question Number : 145 Question Id : 87827036223 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The diffusivity determined experimentally over a range of diffusion temperatures and can be expressed as :

(1) $D = D_0 \exp\left(\frac{RT}{q}\right)$

(2) $D = \frac{RT}{q}\exp\left(-\frac{D_0}{E}\right)$

(3) $D = D_0 \exp\left(-\frac{E}{RT}\right)$

(4) $D = D_0\frac{RT}{q}\exp\left(\frac{E}{T}\right)$

Options :

878270142417. 1

878270142418. 2

878270142419. 3

878270142420. 4

Question Id : 87827036218 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (141 to 145)

Question Label : Comprehension

Diffusion of impurity atoms in silicon is important in silicon integrated circuit processing. The idea of using diffusion techniques to alter the type of conductivity in silicon or germanium was disclosed in a patent by Pfann. Since then various ways of introducing dopants into silicon by diffusion have been studied with the goal of controlling dopant distribution, total dopant concentration, its uniformity reproducibility, and of processing a large number of device wafers in a batch to reduce the manufacturing cost. The diffusion is used to form bases, emitters and resistors in bipolar devices technology, to form source, and drain regions and to dope polgsilicon in mos device technology. Dopant atoms that span a wide range of concentrations can be introduced in to silicon in many ways.

Sub questions

Question Number : 141 Question Id : 87827036219 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The idea of using diffusion techniques was disclosed in patent by Pfann in the year :

(1) 1948
(2) 1952
(3) 1958
(4) 1960

Options :

878270142401. 1

878270142402. 2

878270142403. 3

878270142404. 4

Question Number : 142 Question Id : 87827036220 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A thin layer of dopant is deposited onto silicon surface with a fixed total amount of dopants Q_T per unit area. If D is the diffusivity of dopants, than the surface concentration is :

(1) $C_S = Q_T$

(2) $C_S = \frac{Q_T}{\sqrt{\pi Dt}} \exp\left(\frac{-x^2}{4Dt}\right)$

(3) $C_S = \frac{Q_T}{\sqrt{\pi Dt}}$

(4) $C_S = \frac{Q_T}{Dt}$

Options :

878270142405. 1

878270142406. 2

878270142407. 3

878270142408. 4

Question Number : 143 Question Id : 87827036221 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a diffused layer that forms a p-n junction an average sheet resistance R_S is defined and related to junction depth x_j, the carrier mobility μ, and impurity distribution $C(x)$ as :

(1) $R_S = q \int_0^{x_j} \mu C(x)\, dx$

(2) $R_S = \frac{RT}{q} \int_0^{x_j} \mu C(x)\, dx$

(3) $R_S = \frac{1}{q \int_0^{x_j} \mu C(x)\, dx}$

(4) $R_S = \frac{q}{RT \int_0^{x_j} \mu C(x)\, dx}$

Options :

878270142409. 1

878270142410. 2

878270142411. 3

878270142412. 4

Question Number : 144 Question Id : 87827036222 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Fick's second law of diffusion in one dimensional form can be expressed as :

(1) $\frac{\partial C(x,t)}{\partial t} = \frac{\partial}{\partial x}\left[D\frac{\partial C(x,t)}{\partial x}\right]$

(2) $\frac{\partial C(x,t)}{\partial x} = \frac{\partial}{\partial t}\left[D\frac{\partial C(x,t)}{\partial t}\right]$

(3) $\frac{\partial C(x,t)}{\partial t} = \frac{\partial}{\partial t}\left[D\frac{\partial C(x,t)}{\partial x}\right]$

(4) $\frac{\partial C(x,t)}{\partial t} = \frac{\partial}{\partial x}\left[D\frac{\partial C(x,t)}{\partial t}\right]$

Options :

878270142413. 1

878270142414. 2

878270142415. 3

878270142416. 4

Question Number : 145 Question Id : 87827036223 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The diffusivity determined experimentally over a range of diffusion temperatures and can be expressed as :

(1) $D = D_0 \exp\left(\frac{RT}{q}\right)$

(2) $D = \frac{RT}{q}\exp\left(-\frac{D_0}{E}\right)$

(3) $D = D_0 \exp\left(-\frac{E}{RT}\right)$

(4) $D = D_0\frac{RT}{q}\exp\left(\frac{E}{T}\right)$

Options :

878270142417. 1

878270142418. 2

878270142419. 3

878270142420. 4

Sub-Section Number : 3

Sub-Section Id : 8782701529

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Id : 87827036224 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (146 to 150)

Question Label : Comprehension

Antennas have become increasingly importance to the society and at present, they are indispensable. They are being used every places. They are available in vast varieties. They are operating at various frequencies which are depending on different application. They operate on the principle of Maxwells equation. They have different types of radiation patterns. There are several atmospheric losses in the way of propagation of waves. Due to which signal fades down, when it travels from transmitter to receiver antennas.

Based on the above para, answer the following questions :

Sub questions

Question Number : 146 Question Id : 87827036225 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

$\nabla \times \nabla \times \overline{A}$ is equal to :

(1) $\nabla \cdot \overline{A} - \nabla^2 \overline{A}$

(2) $\nabla \cdot \left(\nabla \times \overline{A}\right) - \nabla \overline{A}$

(3) $\frac{1}{\mu_0} \nabla \times \nabla \times \overline{A}$

(4) $\nabla\left(\nabla \cdot \overline{A}\right) - \nabla \cdot \nabla \overline{A}$

Options :

878270142421. 1

878270142422. 2

878270142423. 3

878270142424. 4

Question Number : 147 Question Id : 87827036226 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Radiation resistance for a small square loop (single turn of side length 'l') of the size $\lambda/10$ is approximately :

(1) 1.38 ohms

(2) 3.12 ohms

(3) 73 ohms

(4) 273 ohms

Options :

878270142425. 1

878270142426. 2

878270142427. 3

878270142428. 4

Question Number : 148 Question Id : 87827036227 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The expression given by is :

$$P_r = P_t \frac{A_{et} \cdot A_{er}}{r^2 \lambda^2}(w)$$

(1) Poynting vector for power flow
(2) Power gain factor
(3) Friis transmission formula
(4) Radar received power

Options :

878270142429. 1

878270142430. 2

878270142431. 3

878270142432. 4

Question Number : 149 Question Id : 87827036228 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

An elliptically polarized wave travelling in the positive Z direction in air has x and y components :

$Ex = 1.5 \sin(\omega t - \beta x)$ V/m

$Ey = 3 \sin(\omega t - \beta x + 75°)$ V/m

The approximate average power per unit area is given by :

(1) 60 mW/m^2
(2) 15 mW/m^2
(3) 30 mW/m^2
(4) 45 mW/m^2

Options :

878270142433. 1

878270142434. 2

878270142435. 3

878270142436. 4

Question Number : 150 Question Id : 87827036229 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The propagation constant for uniform plane wave is given by the expression given below :

(1) $\sqrt{\frac{R+j\omega L}{G+j\omega C}}$

(2) $\sqrt{(R+j\omega L)(G+j\omega C)}$

(3) $\sqrt{\frac{j\omega\mu}{\sigma+j\omega E}}$

(4) $\sqrt{\frac{\eta_2-\eta_1}{\eta_2+\eta_1}}$

Options :

878270142437. 1

878270142438. 2

878270142439. 3

878270142440. 4

Question Id : 87827036224 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (146 to 150)

Question Label : Comprehension

Antennas have become increasingly importance to the society and at present, they are indispensable. They are being used every places. They are available in vast varieties. They are operating at various frequencies which are depending on different application. They operate on the principle of Maxwells equation. They have different types of radiation patterns. There are several atmospheric losses in the way of propagation of waves. Due to which signal fades down, when it travels from transmitter to receiver antennas.

Based on the above para, answer the following questions :

Sub questions

Question Number : 146 Question Id : 87827036225 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

$\nabla \times \nabla \times \overline{A}$ is equal to :

(1) $\nabla \cdot \overline{A} - \nabla^2 \overline{A}$

(2) $\nabla \cdot (\nabla \times \overline{A}) - \nabla \overline{A}$

(3) $\frac{1}{\mu_0} \nabla \times \nabla \times \overline{A}$

(4) $\nabla (\nabla \cdot \overline{A}) - \nabla \cdot \nabla \overline{A}$

Options :

878270142421. 1

878270142422. 2

878270142423. 3

878270142424. 4

Question Number : 147 Question Id : 87827036226 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Radiation resistance for a small square loop (single turn of side length 'l') of the size $\lambda/10$ is approximately :

(1) 1.38 ohms

(2) 3.12 ohms

(3) 73 ohms

(4) 273 ohms

Options :

878270142425. 1

878270142426. 2

878270142427. 3

878270142428. 4

Question Number : 148 Question Id : 87827036227 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The expression given by is :

$$P_r = P_t \frac{A_{et} \cdot A_{er}}{r^2 \lambda^2}(w)$$

(1) Poynting vector for power flow
(2) Power gain factor
(3) Friis transmission formula
(4) Radar received power

Options :

878270142429. 1

878270142430. 2

878270142431. 3

878270142432. 4

Question Number : 149 Question Id : 87827036228 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

An elliptically polarized wave travelling in the positive Z direction in air has x and y components :

$Ex = 1.5 \sin(\omega t - \beta x)$ V/m

$Ey = 3 \sin(\omega t - \beta x + 75°)$ V/m

The approximate average power per unit area is given by :

(1) 60 mW/m^2
(2) 15 mW/m^2
(3) 30 mW/m^2
(4) 45 mW/m^2

Options :

878270142433. 1

878270142434. 2

878270142435. 3

878270142436. 4

Question Number : 150 Question Id : 87827036229 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The propagation constant for uniform plane wave is given by the expression given below :

(1) $\sqrt{\frac{R+j\omega L}{G+j\omega C}}$

(2) $\sqrt{(R+j\omega L)(G+j\omega C)}$

(3) $\sqrt{\frac{j\omega\mu}{\sigma+j\omega E}}$

(4) $\sqrt{\frac{\eta_2-\eta_1}{\eta_2+\eta_1}}$

Options :

878270142437. 1

878270142438. 2

878270142439. 3

878270142440. 4